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ABSTRACT

The California Postsecondary Education Commission's annual review of California public higher education discusses three major topics: program planning; approval of new programs; and the review of existing programs. The section on planning covers planning procedures of the segments, a 1991 list of projected programs, trends in subject areas and among campuses, a commission review of projected programs and a discussion of future roles of the commission. The section on approval of new programs describes the approval processes in the segments and at the commission, early monitoring of borderline programs, and proposals for new programs in 1989-90. The 65 proposed programs are listed. The existing program review section looks at review schedules in the segments, the process at the University of California (UC) and at California State University, (CSU) the results of the process at those two places and the review process at the California Community Colleges (CCC). A concluding section reviews progress and follow-up in implementing the Commission's previous year's recommendations and discusses a proposal for a statewide intersegmental planning framework. Appendixes making up the greater part of the document include: a report titled "The Commission's Role in the Review of Degree and Certificate Programs"; a chart profiling undergraduate degree programs in California's regionally accredited independent institutions; a list of projected programs; recommendations of the Advisory Committee; status of proposed new organized research units, and multi-campus research units, UC; list of currently organized research units and multi-campus research units in the UC; list of existing programs showing current status of each; an outline of the report on program review in the CSU; copy of a memorandum from the Chancellor's office, CCC; a list of the previous year's recommendations, and 16 references. (JB)

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ACADEMIC PROGRAM EVALUATION IN CALIFORNIA 1989-90

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Summary

This is the fifteenth in a series of reports reviewing segmental and Commission activities in the oversight of academic programs in California's public colleges and universities. It covers the period between July 1, 1989 and June 30, 1990.

Academic program evaluation encompasses academic program planning, approval of new programs, and the review of existing ones, and it can serve as a tool in long-range planning and budgeting efforts, a strategy to further the State's economic development, and an instrument of institutional, societal, and intellectual renewal. The report contains separate sections covering each aspect of academic program evaluation -- planning for new programs (pages 5-16), approval of new programs (pp. 17-24), and review of existing programs (pages 25-32). It concludes with a review on pages 33-35 of progress in implementing the recommendations that the Commission included in last year's report and a set of further recommendations on pages 35-36 to strengthen the process of academic program evaluation in the State.

The Commission approved this report on recommendation of its Policy Development Committee at its meeting on June 10, 1991. Additional copies of the report may be obtained from the Publications Office of the Commission at (916) 324-4991. Questions about the substance of the report may be directed to Joan S. Sallee of the Commission staff at (916) 322-8011.

ACADEMIC PROGRAM EVALUATION IN CALIFORNIA, 1989-90

The Commission's Fifteenth Annual Report on Program Planning, Approval, and Review Activities

CALIFORNIA POSTSECONDARY EDUCATION COMMISSION
Third Floor • 1020 Twelfth Street • Sacramento, California 95814-3985

COMMISSION REPORT 91-12
PUBLISHED SEPTEMBER 1991

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1 *Context for the Report*

SHORTLY AFTER its formation in 1974, the California Postsecondary Education Commission directed its staff to prepare an annual report describing the activities related to its program review function. This is the fifteenth in that series of annual reports and summarizes the work undertaken by the staff and the segments for the period between July 1, 1989 and June 30, 1990.

For many years, these reports used the term *program review*, but in recent years, staff has substituted *academic program evaluation* in the hope that this more elastic phrase will transcend any false dichotomies among educational programs and encompass all programs as well as all parts of the process considered in this report -- institutions planning degree programs for the future, proposing new programs for implementation, reviewing existing programs to determine their continuing health and viability, and finally discontinuing some as they decline in efficiency or relevance. The later sections of this report deal one by one with these phases of the program evaluation process:

- Part Two describes segmental and Commission activities in the planning of new programs.
- Part Three discusses those proposed new programs submitted to the Commission for its concurrence or approval.
- Part Four summarizes the review of existing programs and the closure of some of them.
- And Part Five concludes the report with an update on the progress made by California's three segments of public higher education in responding to the recommendations in last year's report and the addition of several new recommendations aimed at strengthening the process of program evaluation both for the State and for the segments.

The Commission's role in program evaluation

In establishing the Postsecondary Education Commission as California's statewide planning and coordinating agency for postsecondary education, the Legislature and Governor recognized the review of academic programs as one of the central functions of overall planning and coordination and thus designated to the Commission specific responsibilities related to program evaluation. Among the Commission's other functions and responsibilities prescribed in the Education Code, those related both directly and indirectly to program evaluation are designated as follows:

> It shall require the governing boards of the segments of public postsecondary education to develop and submit to the commission institutional and systemwide long-range plans in a form determined by the commission after consultation with the segments.
>
> It shall prepare a five-year state plan for postsecondary education which shall integrate the planning efforts of the public segments and other pertinent plans. The commission shall seek to resolve conflicts or inconsistency among segmental plans in consultation with the segments . . . . In developing such plan, the commission shall consider . . . (b) the range and kinds of programs appropriate to each institution or system . . . (g) the educational programs and resources of private postsecondary institutions, and (h) the provisions of this division differentiating the functions of the public systems of higher education.
>
> It shall review proposals by the public segments for new programs and make recommendations regarding such proposals to the Legislature and the Governor.
>
> It shall, in consultation with the public segments, establish a schedule for segmental re-

view of selected educational programs, evaluate the program review processes of the segments, and report its findings and recommendations to the Governor and the Legislature.

It shall serve as a stimulus to the segments and institutions of postsecondary education by projecting and identifying societal and educational needs and encouraging adaptability to change.

It shall collect or conduct or both collect and conduct studies of project manpower supply and demand, in cooperation with appropriate state agencies, and disseminate the results of such studies to institutions of postsecondary education and to the public in order to improve the information base upon which student choices are made.

It shall periodically review and make recommendations concerning the need for and availability of postsecondary programs for adult and continuing education

It shall consider the relationships between academic and occupational and vocational education programs and shall actively encourage the participation of state and local and public and private persons and agencies with a direct interest in these areas (Section 66903).

Unlike its counterpart agencies in a majority of states who assume the major responsibility for reviewing the programs of public institutions, the Commission in its advisory capacity has no authority to conduct reviews of existing programs on individual campuses nor to discontinue programs. For these purposes, it must rely on the mechanisms in place at the University of California, the California State University, and the California Community Colleges for comprehensive and thoughtful evaluation of programs. The capacity and responsiveness of each of the segments to perform this work having to do with projected, new, and existing programs is discussed in the sections that follow.

The Commission staff is guided in its work on academic program evaluation by a set of guidelines adopted by the Commission in December 1981 (Appendix A). It is also assisted by an Intersegmental Program Review Council, consisting of the following members with their staffs:

- Calvin C. Moore, Associate Vice President of Academic Affairs, Office of the President, University of California;
- Sally L. Casanova, Dean, Academic Affairs, Office of the Chancellor, The California State University;
- Rita Cepeda, Vice Chancellor for Policy Analysis and Acting Vice Chancellor for Academic Affairs, Chancellor's Office, California Community Colleges; and
- William J. Moore, President, Association of Independent California Colleges and Universities.

As is apparent by the presence of the Association of Independent California Colleges and Universities on the Intersegmental Program Review Council, the Commission recognizes that higher education in California includes a strong fourth sector of nonpublic institutions offering undergraduate, graduate, and professional programs. Any statewide view of academic program planning, approval, and review is therefore enhanced by information from these institutions. Indeed, in its enabling legislation, the Commission was mandated to integrate the planning efforts of the public segments while considering the educational programs and resources of private postsecondary institutions. The Commission took action on this responsibility last year with a request to the Association of Independent California Colleges and Universities for information about academic programs in the State's independent colleges and universities; those data on undergraduate programs, which were incorporated in the 1990 report, have been updated for this year's report and appear in Appendix B. In addition, Commission staff has drawn a small sample of California's accredited independent colleges and universities, including traditional liberal arts colleges, small comprehensive universities, and research universities, and later this spring will conduct interviews with academic officers at each of them regarding their program planning and review policies and functions.

The uses of program evaluation

Academic program evaluation serves a variety of

functions, but chief among them are program improvement, economic development, and institutional and societal renewal.

Program improvement

In his seminal study, *Program Review in Higher Education* (1982), Robert J. Barak -- the deputy executive director and director of academic affairs and research for the Iowa Board of Regents, and probably the most prolific writer in the country on the topic of academic program evaluation -- observed in workman-like fashion that "Although it is now clear that program approval and review are hardly panaceas for all the ills facing colleges and universities, they have most assuredly proved themselves as useful tools" (p. 3). A few years earlier, Patrick Callan -- then director of the Postsecondary Education Commission -- presciently called program review "the cornerstone of the planning structure we will need to weather the financial and enrollment storms of the 1980s and 1990s, and must provide the central focus of our planning and management" (p. 28). And in 1985, Frederick E. Balderston, Berkeley professor of administration and scholar of academic decision making, when describing the relationship between academic program review and the determination of university priorities, elevated both the discussion and the uses of program review still further when he wrote, "even the definitions of 'quality' and 'efficiency' are difficult to agree on in philosophical terms and still more difficult to translate into practical guides for action. In this sense, quality and efficiency are little miracles when they happen in universities; but they are miracles worth trying for" (p. 248).

The evaluation of educational programs is a means for colleges and universities to achieve these "little miracles" for the process of projecting and developing new programs and reviewing existing ones compels institutions to focus on quality and efficiency in a way that daily operations do not. Although there is still debate over whether program evaluation, and particularly program review, actually saves the State or institutions money through improved programmatic offerings, coordination, or program discontinuance, there is little doubt that such evaluation is an effective tool in program improvement as well as in long-range planning and budgeting efforts, especially if it brings together in one vehicle the consideration of academic, fiscal, personnel, organizational, and facilities issues.

Economic development

Program evaluation can also further economic development at national, state, and local levels. President Reagan's Commission on Industrial Competitiveness concluded in 1985 that universities and schools had a crucial role to play in revitalizing the nation's economy and that strong educational institutions were needed to capitalize on key strengths in technology and human resources. Examining how colleges and universities can enhance economic development, Jeffrey S. Luke writes:

> A dynamic economy requires well-educated people and new ideas. Higher education is a source of both. Community colleges, four-year colleges, and universities have an important contribution to make to a state's and a region's economic vitality, and in many regions of the country they have become the cornerstone of state and local economic development. States' economic futures, and the vitality of the American economy itself, are increasingly linked to universities, colleges, and community colleges (1988, p. 144).

Although a few promising initiatives in this direction are underway in California, including the California Competitive Technology Program and the California Council on Science and Technology, none of the State's public university campuses have created an economic development agenda with clearly stated objectives, let alone tied it to their ongoing process of academic program evaluation. Additionally, states in general have not examined the role their universities can play in economic development nor earmarked resources to support their efforts (Smith, Drabenstott, and Gibson, 1987). Yet responsiveness to State and local economic needs should be a consideration, though admittedly not the sole determinant, in the development of new programs for both the California State University and the University of California, for whom national needs must also play a prominent part.

It is obviously within the stated mission of the California Community Colleges to respond directly to their communities' economic development needs. Although they have long done so in one way or an-

other, a more comprehensive and integrated approach may be indicated. Their efforts and the increased involvement of the University of California and the California State University in stimulating economic growth and diversity through human development, technological development, and policy development (Luke, et al., 1988) deserve further discussion and exploration.

Institutional and societal renewal

While the primary purpose of academic program evaluation remains to improve the quality of individual programs and institutions, if not entire systems of higher education, it can also renew and reshape them by responding to changing fiscal realities, student demand, societal needs, and the explosion of knowledge. Eugene Craven calls it "an integral part of higher education throughout its history. . . , intrinsic to the process of determining what knowledge is of most worth and how it is to be organized, developed, and communicated" (1980, p.xii). Clearly, academic program evaluation is a rich and powerful tool with multiple uses that remains largely unknown outside of academic circles and frequently unexploited within them in its capacity to shape higher education as well as the society that higher education serves.

•

Because of these multiple functions, many people at many levels participate in program evaluation. Each academic department may most appropriately review the content and structure of its programs, but campus policy makers may best be able to decide how those programs relate to an institution's mission, function, and role; system policy makers must evaluate how programs at one institution relate to those of other institutions in the system; and some central coordinating or governing agency must assess the appropriateness of programs in terms of the public interest. With so many interests at work, a necessary tension naturally exists between the State, the system, the campus, and departments. This necessary tension is healthiest where each recognizes the rightful roles and responsibilities of the others in fulfilling the multiple potential of program evaluation.

2 *Planning for New Academic Programs*

THROUGHOUT ALL stages of educational program evaluation, institutions must maintain a delicate balance between innovation and tradition, faculty interests and societal need, campus priorities and state accountability, protection of institutional autonomy and fulfillment of the public trust. It is in program planning that these sometimes contradictory forces become perhaps most pronounced, and colleges, universities, and State agencies find themselves having to walk a fine line made even more tenuous by the fact that program planners must predict the uncertain future in terms of both supply and demand while being assailed by internal and external needs, wants, and expectations. Despite these challenges, however, including fiscal constraints, the State's universities and colleges must put their energies into projecting new programs because it is in that planning for the future that the State, its institutions, individual disciplines, and society itself find their advancement and renewal.

California's colleges and universities are today experiencing extraordinary pressures that make everyday planning, let alone planning for future programs, more difficult yet more necessary than ever. Unprecedented enrollment growth and the largest budget deficit in the State's history directly conflict with the promise of access proffered by the California Master Plan for Higher Education. The State's institutions are having to pare faculty and staff, reduce the number of sections and courses offered, increase fees, and turn away large numbers of qualified students. How can these institutions plan for the future when circumstances make the future so uncertain? Planning for new programs needs to be based on a shared set of enrollment assumptions, yet none of the segments can be assured of the validity of its assumptions, given the volatile nature of the State's resources.

At the same time, California's colleges and universities have a concomitant responsibility to the State to ensure that the programs they offer are those best designed to meet the changing needs of students, society, and the advancement of knowledge. Although most of the projected programs submitted by the segments to the Commission are likely dictated by changes in academic disciplines, pressures from disciplinary organizations or accrediting commissions, and increasing student demand, the culture of any institution makes it easier to expand rather than contract. If projected programs are in subject areas that are already underenrolled or that have produced few degrees over time, initiation of like programs will drain resources away from more needed programs. More importantly, the public's interest will not be well-served. The cost implications of the projected programs discussed in the following section must be taken into account, as the creation of new programs will necessarily affect the resources available to existing programs. Resources are always finite; today's budget crisis makes the resources available even more limited and therefore limiting. A realistic approach to this situation is being taken by institutions like the University of California, Davis whose Academic Planning Council recently advised "selective excellence -- making hard choices in an informed and responsible fashion" (*UC Davis Dateline*, 1991, p. 1).

Planning procedures of the segments

For the past 13 years, the University of California and the California State University have been submitting to the Commission master lists of programs projected for initiation a year or more in the future. This year, the University's list includes programs projected for four years (through 1994-95) and the State University's list covers five years until 1995-96, with the timeline for programs of its new San Marcos campus extended to ten years until the year 2001.

In the 1981 revision of its guidelines, the Commission requested that each listed program be accompanied by a brief descriptive statement that contains "a description of the program and the reasons for proposing it, the relationship of the program to

existing programs and to the mission of the campus, its new staff and facilities requirements, and the possible date for the program's initiation." The University and State University have generally complied with this request by providing descriptive statements that have proved a useful reference for Commission staff as each program is being developed.

University of California

At the University of California, each campus annually submits a list of proposed degree programs and organized research units (ORUs) to the Office of the President, although not to the Board of Regents. This list is developed differently on each campus, but what is common to them all is a broad-base consultation process that includes both faculty and administrative input.

The California State University

The California State University requires that each campus develop planning assumptions and goals and plan, improve, and revise its academic programs in fulfillment of those goals. Its campuses annually update and submit to the Board of Trustees five-year academic plans that serve to guide program, faculty, and facility development. These plans are reviewed by the Chancellor's staff for consistency with Trustee policy developed over the years on academic planning before they are submitted to the Trustees. Once approved by the Trustees, the plans constitute "planning authorization" after which the campuses prepare detailed degree proposals that are first widely reviewed on campus and then submitted to the Chancellor's Office and in some cases to the Commission for concurrence.

California Community Colleges

Unlike the University and the State University, the Chancellor's Office of the California Community Colleges does not annually submit a list of projected programs from their colleges for both historical and practical reasons. With 107 colleges, 1.4 million students, 60,000 faculty, and autonomous local governing boards, the community colleges are not a tightly organized system like their university counterparts, and the authority of the Chancellor's Office versus that of the local governing boards continues to need further definition and differentiation following the proposals of Assembly Bill 1725.

Until Spring 1985, the Chancellor's Office annually issued a Master Plan and Inventory of Programs based upon information provided by each college on the educational programs planned for future implementation. A moratorium on the submission and analysis of even this very elemental documentation was levied in 1985, as planning for the new Management Information Systems began in the Chancellor's Office, and the report has not been compiled for several years.

Last year's Commission report on program evaluation called for the Chancellor's Office to "continue its work toward instituting a system of academic program planning, similar but not necessarily identical to that employed by the University of California and the California State University. The Commission will expect a list of projected programs at a sample of colleges, together with a brief descriptive statement for each program and proposed date of implementation, for this report in 1991, and a list of projected programs and dates for their implementation from all colleges for the 1992 report" (p. 23).

Although the Chancellor's Office has not provided this information, it is moving toward that goal by identifying and cataloguing all existing programs, as noted in a March 1991 memo from the Chancellor's Office reproduced in part below. In addition, on February 5, 1991, the Executive Cabinet of the Chancellor's Office reviewed and approved, prior to field review, proposed revisions to the process for annual submission to the Chancellor's Office of educational master plans from the campuses. The procedures will be incorporated into a new *Program Standards Handbook* that is scheduled for field review this month. Subject to that consultation and final approval, the *Handbook* will call for the colleges to submit a list of the degrees and certificates each college plans to publish in its fall catalog. This list would incorporate information on proposed additional programs, long-range projections for new programs, and proposed substantial changes to previously reported programs. These plans would be reviewed by the Chancellor's Office. These educational master plans would also be used to prepare a systemwide *Catalogue of Degrees and Certificate Programs*.

In the March 1991 memo to Commission staff laying out these plans, the Chancellor's Office pointed out the following:

1. *Chancellor's Office and CPEC's Role in Long-Range Educational Master Planning Unique to Community Colleges*

Specific agreements should be reached regarding how long range planning should be carried out or reported by community colleges and what role either the central office or CPEC should play in this effort. This agreement should be based upon a careful analysis of the program development process as it occurs at community colleges, the resources available for such planning, the typical pitfalls and dangers to be guarded against, the distinctive role of community colleges, and hence the particular contributions to be encouraged in their program innovation. In addition an analysis should be made of the relevant similarities and differences between community college procedures and those of the four-year segments.

A first effort at such analysis is included in the current draft of the Overview section of the new Program Standards Handbook. It is important to underscore that this is a first draft and significant input is anticipated following systemwide consultation.

2. *Delineation of Role and Authority of Chancellor's Office in Systemwide Planning and Accountability*

The question of planning, and the authority of the Chancellor's Office to set certain reporting requirements upon the community colleges in this connection, is a question which must be worked out within this agency at the highest levels of management and in coordination with Research and Planning, Management and Information Systems, Facilities, Vocational Education, Accountability, and Fiscal and Program Compliance and Review. These matters need also to be agreed upon, finally, with equally high levels of management at CPEC, and perhaps between the two boards.

It is important to understand the sequence of events and therefore the priority of the activities to be undertaken by Chancellor's Office staff. The first order of business is to identify and catalogue existing programs and to ensure that the inventory of programs which we are using as a base line is itself complete, correct, and reasonably consistent in the definition of "program" to be used. Once the inventory is complete activities can be undertaken to implement changes in the actual reporting procedures and formats particularly through the use of MIS.

It is this "program identification" effort that has consumed most of our time this year and will continue to do so for at least another year. Anxious as we are ourselves to get to the later stages and be able to report to CPEC on program planning and review, the essential first step is to find out what already is. Until we have done a good job of that step, anything else is premature. CPEC also requested that we provide a list of projected programs at a sample of colleges. However, with our limited staff resources, even to put time into taking the later steps with only a "sample" of colleges -- an approach which would otherwise seem quite desirable -- in this case contributes to delay in the completion of the very staff work which will allow those next steps to be taken for the system as a whole. Accordingly, this request was not addressed this year. Instead, our major thrust has been on "program identification."

1991 list of projected programs

This year's list of projected programs from the University and State University, longer than any such list since the segments began to submit them, appears as Appendix C to this report. Long-time readers will notice that the names of some of the disciplinary categories in Appendix C are different from those used in years past, more relevant divisions having been suggested in some cases by the classification system developed by the National Center for Education Statistics. For example, "Fine and Performing Arts" now appear as "Visual and Performing Arts." In another change, "Area and Ethnic Studies" has become a separate domain within Interdisciplinary Studies because of their interdisciplinary character, even though the National Center places them as a free-standing category.

The 224 programs in this year's submission represent a 17 percent increase over last year's report and a 117 percent increase over the last six years. In the Commission's 1988 report, the list of projected programs was longer than any during the previous decade, with the 178 entries representing a 72 percent increase over the number of programs on the list five years before. In 1989 the number grew to 200, and in 1990 that number declined only slightly to 191. This year's rate of increase, then, continues the climate of expansiveness that marked the University and the State University during the last half of the 1980s -- a climate that can at least in part be explained by projections of increased enrollment. The State's current fiscal crisis will undoubtedly slow the actual development and implementation of these projected programs, as has been publicly acknowledged in the State University's March 1991 Trustees agenda:

> The summary of projected programs . . . suggests considerable program development, particularly for 1991 and 1992. Such proposals are probably not realistic in the current budget climate . . . . Since planning for some of these programs began, expectations about the adequacy of fiscal support available have changed considerably. There were many new submissions this year, all planned and submitted before the 1991-92 budget had been proposed, and it is certain that many of these programs will be postponed.

The Board then unanimously passed the following resolution:

> That the Academic Plans be reconsidered by each campus in light of the current and projected fiscal constraints, and that adjusted plans be brought to the Board in March 1992.

Trends in subject areas

Comparing last year's projected programs with those submitted this year illustrates the changing nature of the curriculum and of educational planning. Both the University of California and the California State University must constantly evaluate their programmatic needs, and as they do, some programs are deleted from the list and others added, titles modified, or degree designations changed.

Within the University of California, for example, Irvine's baccalaureate degree program in East Asian languages and literature is now divided in two: (1) Chinese language and literature, and (2) Japanese language and literature, while its proposed master's degree and Ph.D. programs remain as originally titled. Similarly, UCLA's program in dance is now being referred to as "Theoretical Studies in Dance," raising questions about curricular content and emphasis of the program. Other changes include the addition of a M.S. and Ph.D. in electronic engineering at Santa Cruz -- a campus that may be soon proposing a new school of engineering, and altered implementation dates for several programs.

In the same vein, the California State University's program in land management/planning at its San Bernardino campus is now called urban planning; the Humboldt campus has deleted its projected programs in child development, civil engineering, and recreation administration; and it has changed its implementation dates for several other programs. In addition, the Fresno campus is proposing a master's degree program in industrial technology -- a fact that may not on the surface appear particularly noteworthy, except that the State University's 1977 restudy of industrial arts, industrial technology, and engineering technology (approved as policy by the Trustees in 1978) recommended that campuses not offer master's degrees in industrial technology and that graduate work in the field be offered instead as a specialization within a master's program in business administration. The Office of the Chancellor informed campuses that it would consider a change in this policy if a campus submitted information indicating employer need and student demand for a master's degree in industrial technology. Fresno conducted such a survey and provided results that justified a change which the Trustees approved this past March.

New programs include such full-throated interdisciplinary fields as pharmacological-toxicological sciences and global geo-biosphere dynamics and span areas as diverse as hospitality management, genetic counseling, applied science and technology, and transportation science. Aerospace engineering and the geological sciences seem to be experiencing a

resurgence of interest; a solitary program in Italian has quietly reappeared; and the physical therapy programs on the list reflect the continuing debate within that profession over its appropriate entry-level requirements. The segments' projected programs open a world of intriguing possibilities, with fisheries management, parasitology, evolution and paleobiology, craniofacial biology, aviation, history and philosophy of science, criminology, sport management, and social documentation the stuff of which dreams, novels, the curriculum, and future opportunities are made.

Past years have seen the largest concentration of projected programs in the health professions, the visual and performing arts, engineering, and computer science. A somewhat different pattern has emerged this year. Although the visual and performing arts have increased to 36 projected programs from 35 last year, engineering to 23 from 14, with health remaining constant at 17, two new areas have come to the fore with large numbers of proposed programs. Education has increased from 12 to 16 programs, including eight doctoral programs -- four of which are joint doctorates between the University and State University and another one is between the State University and an independent institution: the University of the Pacific. The second burgeoning area is interdisciplinary studies, which has risen from 27 projected programs last year to 39 this year. Virtually all of the increase has occurred in area and ethnic studies, which has doubled from 10 to 20 programs in one year's time and includes such diverse disciplines as American studies, Asian American studies, Chicano and Latin American studies, German area studies, Native American studies, and women's studies.

Although the increase in the physical sciences is not so dramatic, projected programs have nearly doubled from eight last year to 15 this year. Although four of these (chemistry, geography, geology, and physics) will operate on the new San Marcos campus, the overall increase is still impressive -- particularly in the geological sciences, which may be rebounding from a downturn in the profession during the 1980s.

A healthy proportion of projected programs remain in the biological sciences (11) and business and management (also 11), while computer science (8) may have reached saturation. A field showing an increase for the first time in many years is foreign languages, where the influence of the Pacific Rim is becoming apparent. Each of these fields presents somewhat different challenges when considering the need for new programs.

Special mention should be made here about the State University's study on engineering programs which was brought to the Trustees for information this past March. Building on a 1988 consultant's study on statewide needs in the area, this report proposed the recommendations found in Appendix D on which Trustee action will be sought this coming May. Because the earlier consultant's study, which found evidence of a pending unmet need for engineers on a statewide basis and suggested that the State University's capacity be expanded to meet those needs, did not consider the recently initiated school of engineering at the University of California, Riverside, or the possibility of a similar school at the University's Santa Cruz campus, its analysis and recommendations should be read in this light.

Trends among campuses

The campuses themselves differ in the number of new programs they are projecting. Overall, the University of California shows 99* projected programs, up from 77 last year. While campuses like San Francisco, Berkeley, Santa Barbara, Davis, and San Diego are proposing one, five, seven, eight, and nine programs respectively, Santa Cruz is planning 13, Los Angeles will introduce 14; Riverside, 17 (13 of them doctoral programs); and Irvine 25 (18 of which are doctoral programs).

The State University is proposing a total of 130* new programs, but similar differences exist among its campuses. For example, campuses like San Bernardino (13), Los Angeles (12), Fresno (11), and Fullerton (10) are more prolific than Sacramento, Pomona, and San Luis Obispo (3 each), Chico and Sonoma (2 each), Humboldt (1), and Hayward (none). The system's newest campus -- San Marcos -- will generate 18 new programs, following nine baccalaureate degree programs last year, this time including

* The discrepancy between these two figures and the total noted on page 8 is a result of the joint doctorates listed by both the University and State University.

a master's in education and a master's in business administration.

Commission review of projected programs

From the lists of projected academic programs now submitted annually by the University and State University, Commission staff identifies those that will require Commission staff review. This review is considered warranted for all doctorates, including joint doctorates, and all programs about which there are questions regarding student demand, societal needs, appropriateness to institutional and segmental mission, the number of existing and proposed programs in the field, total costs of the program, the maintenance and improvement of quality, and the advancement of knowledge -- criteria currently used by the Commission in the review of all new programs. In addition, in light of present exigencies, Commission staff must work with the segments to relate academic program planning to increasing enrollments in higher education, demographic changes throughout the State, segmental plans for new campuses and facilities, and budgetary constraints.

Display 1 on pages 11-15 shows the programs requiring Commission staff review. The appearance of a program in this display implies no judgment about its potential, quality, or the ability of a particular campus to offer it. Nor does it mean that it is less likely to be endorsed at any level of the review process than a program not on the list. Its inclusion is simply to alert program planners to the importance of a careful and comprehensive examination.

Appendix E shows the new organized research units (ORUs) and multi-campus research units (MRUs) proposed by the University of California for seven of its campuses, while Appendix F lists those already in existence. Proposals for these units are not sent to the Commission by the University for review or concurrence.

Future role for the Commission

Historically, the Commission has examined the lists and descriptions of projected programs from the University and State University, identified certain of these programs for later review, and produced studies like that on the supply and demand for the education doctorate. Given that the knowledge explosion has resulted in a growing number of projected programs while budget restraints will likely delimit the ability of institutions to provide them, the Commission needs to take a more proactive role during the early stage of the program evaluation process in the interest of encouraging intersegmental cooperation and ensuring against any tendencies toward curricular fragmentation. This step will also allow the Commission to more nearly meet its legislative mandate to "integrate the planning efforts of the public segments" while considering "the educational programs and resources of private postsecondary institutions."

Last year's annual report referred to three ways along the decision-making continuum that State agencies, presumably regulatory in nature, could include institutional involvement in the evaluation process -- reactive, advisory, or formative. Barak (1982) has extolled formative participation because it at least theoretically allows the opportunity for involvement in all the review stages. By expanding its focus to the front-end of the planning continuum, the Commission's goal of developing a coherent planning framework may more easily be achieved.

DISPLAY 1 Projected Programs Requiring Commission Staff Review

Joint doctoral programs

Educational Administration[1]	Ed.D.	UC Los Angeles/CSULA	To be determined
Communicative Disorders[2]	Ph.D.	UC San Diego/SDSU	1992
Educational Administration[1]	Ed.D.	UC San Diego/SDSU	1993
Science and Mathematics Education	Ph.D.	UC San Diego/SDSU	1993
Educational Leadership	Ed.D.	UC Santa Barbara/CSU Bakersfield	1994
Geological Sciences	Ph.D.	UC Santa Barbara/SDSU	1992
CranioFacial Biology	Ph.D.	CSU Northridge/USC	1991
Educational Administration	Ed.D.	CSU Sacramento and UOP	1992

Doctoral programs

Applied Science and Technology	M.S./Ph.D.	UC Berkeley	1991
Cognitive Science	M.A./Ph.D.	UC Berkeley	1991
Art History	Ph.D.	UC Davis	1993
Education	Ph.D.	UC Davis	1991
Italian	M.A./Ph.D.	UC Davis	1992
Parasitology	M.S./Ph.D.	UC Davis	1992
Population and Evolutionary Biology	Ph.D.	UC Davis	1992
Anthropology	Ph.D.	UC Irvine	1992-93
Art History	M.A./Ph.D.	UC Irvine	1991-92
Criminology, Law, and Society	M.A./Ph.D.	UC Irvine	1992
Critical Theory	Ph.D.	UC Irvine	1991
Dance	Ph.D.	UC Irvine	1992-93
Drama Theory and Criticism	Ph.D.	UC Irvine	1992-93
East Asian Languages and Literatures	M.A./Ph.D.	UC Irvine	1991-92
East Asian Studies	M.A./Ph.D.	UC Irvine	1992-93
Educational Administration	Ed.D.	UC Irvine	1991-92
Environmental Health and Public Policy	Ph.D.	UC Irvine	1993-94
Film and Media Studies	M.A./Ph.D.	UC Irvine	1993-94
Geosciences	M.S./Ph.D.	UC Irvine	1991
Health Psychology	Ph.D.	UC Irvine	1992
History and Philosophy of Science	Ph.D.	UC Irvine	1992-93
Human Development	Ph.D.	UC Irvine	1992
Human Genetic Disease	Ph.D.	UC Irvine	1992-93
Sociology	Ph.D.	UC Irvine	1993-94
Transportation Science	Ph.D.	UC Irvine	1992
Global Geo-Biosphere Dynamics	M.S./Ph.D.	UC Los Angeles	1991-92
Music (Instrumental, Vocal, and Conducting Performance	M.M./D.M.A.	UC Los Angeles	1991-92
Theoretical Studies in Dance	Ph.D.	UC Los Angeles	1991-1992
Women's Studies	Ph.D.	UC Los Angeles	1992
Art History	Ph.D.	UC Riverside	1991-92
Child Clinical (Psychology Department)	Ph.D.	UC Riverside	1991-92

(continued)

1. Appears on the University of California list only.
2. Appears on the California State University list only.

DISPLAY 1 Continued

Computer Science	Ph.D.	UC Riverside	1991
Dance History	Ph.D.	UC Riverside (Intercampus)	1992
Engineering	M.S./Ph.D.	UC Riverside	1994-95
French	Ph.D.	UC Riverside	1991-92
History and Philosophy of Science	M.A./Ph.D.	UC Riverside	1991-92
International Studies	Ph.D.	UC Riverside	1991-92
Linguistics	Ph.D.	UC Riverside	1992-93
Management	Ph.D.	UC Riverside	1992
Microbiology	M.S./Ph.D.	UC Riverside (interdepartmental)	1992
Neuroscience	Ph.D.	UC Riverside (interdepartmental)	ASAP
Religions	Ph.D.	UC Riverside	1994
Architecture	M.Arch./Ph.D.	UC San Diego	1992
Art History / Criticism (Visual Arts)	M.A./Ph.D.	UC San Diego	1993
Theatre	Ph.D.	UC San Diego	1992
Pharmacological-Toxicological Sciences	Ph.D.	UC San Francisco	1992
Engineering Science	Ph.D.	UC Santa Barbara	1992
Environmental Science and Management	M.E.S.M./Ph.D.	UC Santa Barbara	1992-93
Evolution and Paleobiology	M.S./Ph.D.	UC Santa Barbara	1994
Human Development	M.A./Ph.D.	UC Santa Barbara	1992
Applied Mathematics	M.S./Ph.D.	UC Santa Cruz	1992-93
Education	Ph.D.	UC Santa Cruz	1992-94
Electronic Engineering	M.S./Ph.D.	UC Santa Cruz	1992-93
Environmental Studies	M.A./Ph.D.	UC Santa Cruz	1992-93
Environmental Toxicology	M.S./Ph.D.	UC Santa Cruz	1991-92
Marine Sciences	Ph.D.	UC Santa Cruz	1993-94
Music	Ph.D.	UC Santa Cruz	1994-95
Visual Studies	Ph.D.	UC Santa Cruz	1993-94

Projected programs in fields with many existing and/or proposed programs

Note: Projected doctoral programs in each discipline area are listed in italics at the end of each disciplinary category that follows.

Area and Ethnic Studies

German Area Studies	A.B.	UC Berkeley	1993
Chinese Language and Literature	B.A.	UC Irvine	1990-91
East Asian Languages and Literatures	M.A.	UC Irvine	1991-92
East Asian Studies	M.A.	UC Irvine	1992-93
Japanese Language and Literature	B.A.	UC Irvine	1990-91
Women's Studies	B.A.	UC Irvine	1991-92
Asian American Studies	B.A.	UC Los Angeles	1991-96
East Asian Languages and Culture	B.A.	UC Riverside	1991-92
Women's Studies	B.A.	UC Riverside	1990-91
Japanese Studies	B.A.	UC San Diego	1992
Asian American Studies	B.A.	UC Santa Barbara	1992

(continued)

DISPLAY 1 Continued

Chicano and Latin American Studies	B.A.	CSU Fresno	1992
Native American Studies	B.A.	Humboldt State University	1991
Asian Studies	B.A./M.A.	CSU Los Angeles	1992
Asian American Studies	B.A.	CSU Northridge	1993
Japan Studies	B.A.	San Diego State Univ.	1991
Women's Studies	M.A.	San Francisco State Univ.	1991
American Studies	B.A.	CSU San Marcos	1992-2001
Women's Studies	B.A.	CSU San Marcos	1992-2001
East Asian Languages and Literatures	*Ph.D.*	*UC Irvine*	*1991-92*
East Asian Studies	*Ph.D.*	*UC Irvine*	*1992-93*
Women's Studies	*Ph.D.*	*UC Los Angeles*	*1992*
Computer Science/Engineering			
Computer Science	M.S.	CSU Bakersfield	1994
Computer Science	M.S.	CSU Dominguez Hills	1992
Computer Engineering	B.S.	CSU Fullerton	1991
Computer Science	M.S.	CSU Los Angeles	1991
Computer Science	M.S.	CSU San Bernardino	1991
Computer Science	B.S.	CSU San Marcos	1992-2001
Computer Science	M.S.	CSU Stanislaus	1992
Computer Science	*Ph.D.*	*UC Riverside*	*1991*
Engineering			
Civil Engineering	B.S.	UC Irvine	1991
Electrical Engineering	B.S.	UC Irvine	1991
Mechanical Engineering	B.S.	UC Irvine	1991
Engineering	B.S./M.S.	UC Riverside	1994-95
Ocean Engineering	B.S./M.S.	UC San Diego	1992/1994
Electronic Engineering	B.S./M.S.	UC Santa Cruz	1992-93
Construction Management	B.S.	CSU Fresno	1992
Electrical Engineering	M.S.	CSU Fresno	1992
Industrial Technology	M.S.	CSU Fresno	1991
Mechanical Engineering	M.S.	CSU Fresno	1992
Surveying Engineering	M.S.	CSU Fresno	1991
Civil Engineering	B.S. / M.S.	CSU Fullerton	1991
Electrical Engineering	B.S. / M.S	CSU Fullerton	1991
Mechanical Engineering	B.S. / M.S.	CSU Fullerton	1991
Aerospace Engineering	M.S.	CSU Long Beach	1991
Civil Engineering	B.S.	CSU Los Angeles	1991
Electrical Engineering	B.S.	CSU Los Angeles	1991
Mechanical Engineering	B.S.	CSU Los Angeles	1991
Electrical Engineering	M.S.	Cal Poly, Pomona	1991
Aerospace Engineering	M.S.	San Jose State University	1992
Structural Engineering	M.S.	Cal Poly, San Luis Obispo	1991
Engineering	*Ph.D.*	*UC Riverside*	*1994-95*
Engineering Science	*Ph.D.*	*UC Santa Barbara*	*1992*
Electronic Engineering	*Ph.D.*	*UC Santa Cruz*	*1992-93*
Health			
Physical Therapy	M.P.T.	CSU Fresno	1992
Physical Therapy	M.P.T.	CSU Long Beach	1991

(continued)

DISPLAY 1 Continued

Physical Therapy	M.P.T.	CSU Northridge	1992
Physical Therapy	B.S.	CSU Sacramento	1993
Physical Therapy	M.S.	San Diego State University	1992
Visual and Performing Arts			
Arts	B.F.A.	UC Los Angeles	1992
Visual Arts	M.F.A.	UC Santa Cruz	1992-93
Art	B.F.A.	CSU Dominguez Hills	1992
Art	B.F.A./M.F.A.	CSU Northridge	1992
Art	B.F.A.	CSU Sacramento	1991
Art	M.A.	CSU San Bernardino	1991
Art	B.F.A.	San Diego State University	1991
Fine Arts	B.A.	CSU San Marcos	1992-2005
Art	B.F.A.	Sonoma State University	1991
Art	B.F.A.	CSU Stanislaus	1995
Visual Studies	*Ph.D.*	*UC Santa Cruz*	*1993-94*
Art History	M.A.	UC Irvine	1991-92
Art History Criticism (Visual Arts)	M.A.	UC San Diego	1993
Art History	*Ph.D.*	*UC Davis*	*1993*
Art History	*Ph.D.*	*UC Irvine*	*1991-92*
Art History	*Ph.D.*	*UC Riverside*	*1991-92*
Art History/Criticism (Visual Arts)	*Ph.D.*	*UC San Diego*	*1993*
Dance	B.A.	CSU Fullerton	1991
Dance	M.F.A.	CSU Long Beach	1991
Dance	*Ph.D.*	*UC Irvine*	*1992-93*
Theoretical Studies in Dance	*Ph.D.*	*UC Los Angeles*	*1991-92*
Dance History	*Ph.D.*	*UC Riverside*	*1992*
Textile Arts and Costume Design	M.F.A.	UC Davis	Five yrs.
Theatre Arts	M.F.A.	UC Santa Cruz	1991-92
Theatre Arts	B.A.	CSU Bakersfield	1994
Theatre Arts	M.F.A.	CSU Fresno	1992
Theatre Arts	B.F.A.	CSU Northridge	1993
Drama Theory and Criticism	*Ph.D.*	*UC Irvine*	*1992-93*
Theatre	*Ph.D.*	*UC San Diego*	*1992*
Ethnomusicology	B.A.	UC Los Angeles	1991
Music (Instrumental, Vocal, and Conducting Performance	M.M.	UC Los Angeles	1991-92
Music Theater	B.A.	UC Los Angeles	1992-93
Music	B.A.	CSU Bakersfield	1993
Music	M.M.	CSU Los Angeles	1991
Music (Instrumental, Vocal, and Conducting Performance	*D.M.A.*	*UC Los Angeles*	*1991-92*
Music	*Ph.D.*	*UC Santa Cruz*	*1994-95*
Film and Media Studies	M.A.	UC Irvine	1993-94
Film and Video	B.A.	UC Santa Cruz	1992-93

(continued)

DISPLAY 1 Continued

Cinema	M.F.A.	San Francisco State University	1992
Film and Media Studies	*Ph.D.*	*UC Irvine*	*1993-94*

Projected programs in fields with uncertain student or societal demand

Applied Studies	B.S.	CSU Dominguez Hills	1991
Architecture	M.S.	UC Berkeley	1992
Architecture	B.A.	UC San Diego	1992
Aviation	B.S.	CSU Los Angeles	1992
Classical Studies	M.A.	UC San Diego	1993
Cognitive Science	B.A.	UC Berkeley	1991
Cognitive Science	A.B.	UC Riverside	1994-95
Cognitive Studies	B.A.	CSU Stanislaus	1991
Communication	M.A.	CSU San Bernardino	1993
Computer Information Systems	M.S.	CSU Los Angeles	1992
Creative Writing	M.F.A.	UC Santa Cruz	1993-94
Development Studies	M.A.	UC Los Angeles	1991
Facility Planning and Management	M.F.P.M.	UC Irvine	1995
Geology	M.S.	CSU Fullerton	1992
Geology	B.S.	CSU San Marcos	1992-2001
Geosciences	M.S.	San Francisco State University	1992
Global Geosciences	B.S.	UC San Diego	1992
Graphic Communication	B.S.	CSU Los Angeles	1991
Health Science	B.S.	CSU Fullerton	1991
History and Philosophy of Science	B.A.	UC Riverside	1991-92
Human Resource Development	M.A.	CSU Chico	1992
Instructional Technology	B.S.	CSU Chico	1992
Liberal Studies	M.A.	CSU Long Beach	1992
Management Information Systems	M.S.	CSU Bakersfield	1991
Physical Education	M.S.	CSU San Bernardino	1992
Social Documentation	M.A.	UC Santa Cruz	1993-94
Sport Management	B.A.	CSU Los Angeles	1993
Telecommunications	B.S.	CSU Dominguez Hills	1992
Vocational Education	B.S.	CSU San Bernardino	1991

Projected programs that may have significant resource implications

Environmental Science and Management	MESM/Ph.D.	UC Santa Barbara	1992-93
Environmental Studies	M.A./Ph.D.	UC Santa Cruz	1992-93
Fisheries Management	M.S.	UC Davis	Five years
Global Bio-Geosphere Dynamics	M.S./Ph.D	UC Los Angeles	1991-92
Social Statistics	M.A.	UC Los Angeles	1991-92
Neuroscience	Ph.D.	UC Riverside	ASAP

Source: California Postsecondary Education Commission staff analysis.

3 *Approval of New Programs*

THE COMMISSION has traditionally focused its attention almost entirely on this mid-point of educational program evaluation, prompted at least in part by the requirement in Section 66903 (6) of the Education Code to "review proposals by the public segments for new programs and make recommendations regarding such proposals to the Legislature and Governor." This "review and comment" function applies to all programs, except joint doctoral degree programs between the California State University and independent institutions, where the Commission has authority either to approve or deny them. Although the Commission acts only in an advisory capacity, rather than having regulatory authority, (thus making the phrase *program approval* something of a misnomer), both university systems generally respond to concerns raised and have declined to implement programs with which Commission staff has not concurred. Programs in the community colleges, however, are still occasionally begun without consultation with or concurrence by Commission staff. As described later in this section, Chancellor's Office staff has been working diligently over the last two years to improve program approval procedures and ameliorate this situation.

Approval processes in the segments and at the Commission

University of California

Before proposals from the University of California and the California State University come to the Commission for review, they have already been the subject of broad consultation both at the individual campus and at the systemwide level. In the University, proposals for baccalaureate degree programs are sent directly to the Office of the President where they are typically approved unless there are serious resource implications. Following a recommendation in last year's report, the University now sends a letter to the Commission describing for information only the content of these baccalaureate degree proposals. Proposals for new graduate degree programs, on the other hand, are transmitted by the campus both to the Coordinating Committee on Graduate Affairs and to the Office of the President where staff prepares a preliminary analysis of resource requirements, projected enrollments, uniqueness of the program, student demand, and the job market for graduates of the proposed program. If the Coordinating Committee approves the program, the aforementioned analysis is completed with a recommendation for approval or non-approval and submitted to the Academic Planning and Program Review Board. Proposals for joint doctoral programs between the University of California and the California State University undergo a similar but necessarily more broadly consultative review process.

The California State University

In the California State University, proposals for both baccalaureate and graduate degree programs undergo campus review before being submitted to the Office of the Chancellor, which then undertakes careful and painstaking analysis of them. This analysis often results in a proposal being returned to the campus for further information or rethinking -- a sometimes iterative process that may extend several months or years. The State University staff sends a monthly report describing the status of all new program proposals to the Commission. In general, changes in options, concentrations, special emphases, minors, and revisions to existing curricula have been delegated by the Office of the Chancellor to the campuses themselves.

California Community Colleges

The Education Code and Title 5 of the Administrative Code require the Chancellor's Office to approve not only each new program offered by a community college but also each new course that is not part of any already approved program and all new noncredit courses. In the University or the State Universi-

ty, there cannot be any free-standing courses, only those that are affiliated with a program. In the community colleges, however, there are currently more than 7,000 programs and 137,000 credit and 13,000 noncredit courses offered. The Chancellor's Office has recently proposed that separate course approvals now made at the State level be delegated to local districts wherever courses meet particular standards for degree applicability and with the understanding that the Board of Governors may annually review this policy and elect to have certain types of courses reviewed by the Chancellor's Office. In addition, as reported in last year's report, the Chancellor's Office is continuing to work toward a comprehensive academic program planning and program review system and is seeking to streamline and strengthen its State-level approval procedures. These refinements include an automated tracking system, checklists and instructions for Chancellor's Office reviewers to decrease the time required for each review and assure greater consistency across reviewers and over time, in-house training sessions for reviewers on the use of these check lists, and revision of the Handbook on Curriculum and Instruction. Each of these improvements is at a different stage of development.

California Postsecondary Education Commission

If a program has appeared on the list of projected programs necessary for Commission review, the proposal itself -- or a summary of it, as is more commonly the case in the University of California -- is then submitted to Commission staff who have 60 days to respond. Staff most often concurs with proposals or asks for more information; it rarely takes the position of non-concurrence, particularly on submissions from the University of California or the California State University.

Early monitoring

Occasionally, Commission staff concurs with a program reluctantly, dissuaded perhaps by fluctuating or declining enrollments in existing programs in the same field while at the same time persuaded by other documentation regarding student demand, market demand, or the judgment of the systemwide office. While the health of higher education requires some degree of risk-taking so that the curriculum will remain vital and responsive, responsible risk-taking demands periodic monitoring. The Commission believes this small number of programs for which the staff has given concurrence with demurrer should be reviewed by the relevant segment before its regularly scheduled campus reviews in five to seven years. Thus last year it recommended that each segment should develop procedures to monitor for the first three to four years that small number of programs with which the Commission concurred with some reluctance.

University of California

The University of California's Coordinating Committee on Graduate Affairs considered this recommendation and concluded "that it would be premature to expect a newly established program to address special concerns before it has had an opportunity to become established and viable. Instead, it has stipulated that any special concerns with respect to newly approved programs be considered in the course of regular program reviews (usually after five years) and reported to the respective Graduate Councils."

The California State University

In contrast, the California State University has agreed to inform campuses that Commission staff concurred reluctantly and will collect within two years of implementation some information about the program, including number of courses offered, number of majors enrolled, and changes in the program as reflected in the campus catalog. Commission staff is interested in discussing with staff in the Office of the Chancellor how this approach will eventually be evaluated and if it does indeed result in stronger procedures and programs, rather than increased paperwork for the segmental office.

California Community Colleges

The Chancellor's Office of the California Community Colleges is using its new category of "limited approval" to respond to this recommendation. However, "limited approval" allows the college to buy time to submit an improved application and/or to respond to the concerns of either the Chancellor's Office or the Commission, rather than addressing the need

for early monitoring of programs. Since its responsibilities for program review are still being developed by the Chancellor's Office, this recommendation may be premature to require from the two-year colleges.

Proposals for new programs in 1989-90

As shown in Display 2, the Commission received 66 proposals for new programs from the segments during the last academic year from July 1, 1989 to June 30, 1990 -- nearly twice the number submitted to the Commission the preceding year. This number represents the most new programs since 1980-81 and a dramatic change from 1988-89, when the total was the lowest since the Commission staff began to compile figures in 1976-77. Since the proposal for the joint doctorate is counted twice, however, against the totals for both the University and State University, 65 proposals for new programs may be the more accurate figure. In either case, part of the increase may be attributable to the greater responsiveness of the Chancellor's Office of the community colleges and its improved program approval procedures. An attendant reason is the substantial increase for both universities. The State University's 29 new programs ties the highest number ever, and new programs for the two segments combined reach the highest total since the first year of reporting.

DISPLAY 2 Number of Proposals for New Programs Received from Each Public Segment Since 1976-77

Year	California Community Colleges	The California State University	University of California	Total
1976-77	93	29	17	139
1977-78	101	20	15	136
1978-79	55	17	13	85
1979-80	43	16	12	71
1980-81	51	17	9	77
1981-82	43	11	5	62
1982-83	32	27	8	65
1983-84	16	23	6	45
1984-85	25	22	4	51
1985-86	27	9	7	43
1986-87	26	19	5	50
1987-88	15	21[1]	5[1]	41
1988-89	6	22[3]	7[4]	35
1989-90	25	29[2]	12[1]	66

1. Includes one joint doctorate.
2. Includes two joint doctorates.
3. Includes two joint doctorates and one joint master's.
4. Includes one joint doctorate and one joint master's.

Source: California Postsecondary Education Commission files.

University of California

The 12 program proposals from the University of California listed in Display 3 on pages 21-23 represent the highest number from the University in the last decade; now that the University is sending all baccalaureate degree proposals as information items to Commission staff, the data are comparable to those provided by the State University. While the University campuses at Irvine, Los Angeles, and Riverside may have the largest number of projected programs, as indicated in Part Two above, their absence is notable on this year's list of new programs submitted for Commission review. The remaining general campuses at Berkeley, Davis, San Diego, Santa Barbara, and Santa Cruz submitted programs spanning a number of diverse disciplines, each with a unique reason for its implementation (apart from meeting the general criteria of student demand, societal need, advancement of knowledge, and the like used in Commission review). For example, the molecular and cell biology program at Berkeley reflects a changing focus in the biological sciences. The Santa Cruz program in economics is unique not only in the State but in the world, with only two programs at Geneva and Stockholm having the same specialization in international economics. And Santa Cruz was the only campus in the University of California without a graduate program in anthropology before its listed program was approved.

The California State University

Where the new programs offered by the University all represent more traditional disciplinary areas, despite their unique foci, the new programs in the State University include both traditional academic areas as well as more occupational ones. For example, gerontology, health care administration, and

hospitality management would be unheard of as undergraduate programs in the University of California, directed as these programs are to particular professions, but it is the differentiation of function among California's segments of higher education that give it its strength.

Eleven of the 19 campuses in the State University submitted 29 proposals for new programs -- 13 of them directed toward graduate degrees, including two joint doctorates: one in geography with the University of California and one in educational administration with the University of the Pacific. Of those programs reviewed, Commission staff primarily examined those in the health sciences, engineering, and computer sciences. Sixteen other proposals fell in the category of "Information Only" as the programs did not appear on the Commission's list of projected programs to review. One of these, "Teaching English to Speakers of Other Languages" -- a master's degree program developed by the Los Angeles campus of the State University, was the first degree program of its kind in the system. As such programs may serve as models for the future, it would be useful if first-time programs were specifically brought to the attention of Commission staff.

California Community Colleges

The path to concurrence for programs from the California Community Colleges is much less smooth than for their university counterparts. Of the 25 new programs listed, more information was asked about seven; no action was taken on one because it already appeared in the college's catalog as well as in the Commission's biennial guide, *California Colleges and Universities, 1990*; and Commission staff did not concur on two.

The programs bear testament to the diversity offered by the community colleges and signal new developments in an increasingly complex workplace. A few years ago, specialties like "Fitness Specialist," "Computer Graphics," "Electronic Publishing Design," and "Environmental Hazardous Materials Technology" simply did not exist, and the community colleges must be thanked for responding to society's needs in these areas. The Environmental Hazardous Materials Technology Consortium is particularly noteworthy for its collaboration among the eight colleges listed and their plans to expand to 24 by Fall 1992.

DISPLAY 3 *Proposals for New Programs Received by the Commission, July 1, 1988, to June 30, 1989*

Date Received	Campus	Program	Degree(s)	Decision
Joint Doctorates				
9/13/89	CSU Sacramento/UOP	Educational Administration	Ed.D.	More information; Not approved
5/18/90	SDSU/UCSB	Geography	Ph.D.	Concur
University of California				
7/10/89	Santa Cruz	Economics	Ph.D.	Concur
8/1/89	Davis	Food Science	Ph.D.	Concur
8/1/89	Davis	Neurobiology	Ph.D.	Concur
8/7/89	Berkeley	Molecular and Cell Biology	M.A./Ph.D.	Concur
8/7/89	Santa Barbara	Musical Arts	M.M./D.M.	Concur
8/14/89	Berkeley	Health Services and Policy Analysis	Ph.D.	Concur
8/28/89	Santa Barbara	Computer Science	M.S./Ph.D.	Concur
9/13/89	San Diego	Literature	Ph.D.	More info/Concur
1/17/90	Santa Cruz	Anthropology	M.A./Ph.D.	Concur
4/20/90	Santa Barbara	Communication	Ph.D.	Concur
5/1/90	San Diego	Chemistry	B.S.	Information only
The California State University				
7/19/89	San Jose	Gerontology	M.S.	Concur
8/2/89	Fullerton	Biochemistry	B.S.	Information only
8/7/89	San Diego	International Business	B.A.	Information only
8/10/89	Pomona	Management (External Degree)	M.S.	Concur
8/21/89	San Francisco	Geology	B.S.	Information only
9/22/89	San Francisco	Japanese	M.A.	Information only
10/5/89	Sacramento	Asian Studies	B.A.	Information only
11/22/89	Long Beach	Health Care Administration	M.S.	More info/Concur
11/27/89	San Francisco	Engineering	M.S.	Concur
12/4/89	Chico	Journalism	B.A.	Information only

(continued)

DISPLAY 3 Continued

Date Received	Campus	Program	Degree(s)	Decision
The California State University (continued)				
12/4/89	Chico	Psychology	M.S.	Information only
12/4/89	Fresno	Animal Sciences	B.S.	Information only
12/4/89	Fresno	Food and Nutritional Sciences	B.S.	Information only
12/4/89	Fresno	Plant Science	B.S.	Information only
12/4/89	Northridge	Biology	B.S.	Information only
12/11/89	San Francisco	Hospitality Management	B.S.	Information only
1/25/90	Northridge	Biochemistry	B.S.	Information only
1/30/90	San Diego	Public Health/Environmental Health Sciences	M.S.	Concur
3/2/90	Los Angeles	Teaching English to Speakers of Other Languages	M.A.	Information only
3/2/90	Sacramento	Liberal Arts	M.A.	Concur
3/8/90	Fresno	Interior Design	B.A.	Information only
3/15/90	San Luis Obispo	Music	B.A.	Concur
5/4/90	Chico	Computer Information Systems	B.S.	Concur
5/7/90	San Jose	Chemistry	M.A.	Information only
6/8/90	Sacramento	Gerontology	B.S.	Concur
6/25/90	Fresno	Computer Science	M.S.	Concur
6/27/90	San Luis Obispo	Electronic Engineering Technology	B.S.	Concur
California Community Colleges				
7/3/89	Irvine Valley	Fitness Specialist	A.A./Cert.	More information
7/5/89	Bakersfield	Clothing and Textiles	A.A./Cert.	More information
7/5/89	Bakersfield	Technical Theater	A.A./Cert.	More information
9/7/89	Antelope Valley	Computer Graphics	A.A./A.S./Cert.	Concur
10/1/89	Southwestern	Air Traffic Control	A.A.	Information only
10/1/89	Southwestern	Library Research Skills	Non-degree credit	Information only
1/31/90	Bakersfield	Human Services	A.A./A.S.	Concur
2/16/90	Coastline	International Business	Certificate	Concur
2/16/90	Cosumnes	Marketing Communication	A.A./A.S./Cert.	Not concur
2/16/90	Cosumnes	Medical Records Technician	A.A./A.S./Cert.	Concur
2/16/90	Cypress	Computer Graphics	A.A./A.S./Cert.	More information
2/16/90	Cypress	Electronic Publishing Design	A.A./A.S./Cert.	More information

(continued)

DISPLAY 3 Concluded

Date Received	Campus	Program	Degree(s)	Decision
California Community Colleges (continued)				
2/16/90	Moorpark	Radiologic Technology	A.A.	Concur
2/16/90	Victor Valley	Construction Technology	A.A./Cert.	Concur
2/16/90	Victor Valley	Drafting Technology	A.A./Cert.	More information
5/31/90	Gavilan	Paralegal	A.A./Cert.	More information
6/1/90	Barstow	Cosmetology	A.A./Cert	Concur
6/1/90	Merced	Philosophy	A.A.	Concur
6/1/90	Cerro Coso	Quality Assurance	A.A./Cert.	Concur
6/25/90	Alan Hancock	International Studies	A.A.	Concur
6/25/90	Cerritos	Japanese	A.A.	Not concur/ Approved later by Chancellor's Office
6/25/90	Environmental Hazardous Materials Technology Consortium*	Environmental Hazardous Materials Technology	A.A./Cert.	Concur
6/25/90	Fresno	Building Safety and Code Administration	A.S./Cert.	Concur
6/25/90	Los Angeles Mission	Legal Assistant/Paralegal	A.A./Cert.	No action
6/25/90	Los Angeles Pierce	Religious Studies	A.A.	Concur

* Includes Bakersfield, Cosumnes River, Fresno, Fullerton, Merced, Oxnard, San Mateo, and West Los Angeles colleges.

Source: California Postsecondary Education Commission staff files.

4 *Review of Existing Academic Programs*

COLLEGES and universities regularly conduct evaluations of their courses and programs to assess, among other indices, their quality, relevance, and costs. According to Barak's 1982 study, over 80 percent of all colleges and universities and most higher education agencies or boards in the country employ some sort of program review. Although the focus of these reviews used to be quite limited (a university might review only its graduate programs, for example, while a community college might review only its vocational programs in response to federal mandates), program reviews today are both more encompassing and systematic.

Existing programs at all levels are reviewed for many different purposes and can involve a wide variety of individuals ranging from faculty members both inside and outside the institution, administrators, and students to alumni, trustees, and state board members. The most common and legitimate forms of program review are formative or summative, although some are conducted for public relations purposes or for the sheer exercise of power; these latter are fortunately rare (Barak and Breier, 1990, pp. 3-4). Successful reviews are most likely to be those based on principles of fairness, comprehensiveness, timeliness, good communication, objectivity, credibility, and utility (ibid., p. 5).

Review schedules in the segments

All campuses in the University of California and the California State University have established five- to seven-year schedules for the review of existing programs. Appendix G lists the programs, areas, and organized research units reviewed in both universities during 1989-90.

The nine campuses of the University of California scheduled 191 reviews, completing 113 or 59 percent of them -- ranging from 33 at Davis and 24 at Los Angeles to three at San Francisco. Comparisons between the two segments or even within the University of California itself are difficult to make, however, because one campus may list its reviews discipline by discipline where another may review an entire school, yet count it as one review. While the quality of the review process, then, does not necessarily reside in the number of reviews completed, a high proportion of protracted reviews -- particularly reviews extending over at least two years as has occurred at San Diego -- must raise questions about the review process and its timely completion.

The 19 campuses of the State University, on the other hand, scheduled a total of 230 reviews and completed 175, or 76 percent of them. The Hayward, Humboldt, Los Angeles, Sacramento, San Bernardino, San Diego, San Francisco, and San Luis Obispo campuses submitted summaries for the full complement of programs they had scheduled, while the other campuses submitted summaries for some proportion of them.

There is as yet no comparable data on the number of program reviews occurring in the California Community Colleges, but the study recently completed by the Chancellor's Office appears to be a first step in obtaining such information for the future.

The process at the University of California

Each fall, staff from the Office of the President in the University of California prepares and sends a report on the review of existing academic programs and research units to the Commission, campus chancellors, and academic vice chancellors. That document includes the reason for each review, the composition of the review team, the criteria used, and the major findings and recommendations generated by each review. It also includes a summary of any actions taken by the campuses to implement recommendations made in previous years' reviews. These added sections contribute a sense of continuity by ensuring that continuing attention is paid to the concerns raised in the past.

In the University of California, program reviews occur for a number of reasons. Most take place be-

cause they are regularly scheduled reviews, while some are mandated by policies and procedures concerning organized research institutes, involve experimental programs, are done for accreditation purposes, prompted by low enrollments, initiated by the dean, respond to specific criticisms of the program, or occur because of the requirement that each newly approved graduate academic program be reviewed within four years of the date of first enrollments. The reviews are conducted by internal faculty committees or by external review panels chosen from academia and sometimes industry.

Processes at the California State University

The State University Trustees' decision in 1971 to require periodic review of academic programs and each campus to develop its own review policies and procedures was among the first actions of its kind in the country. Since that time, summaries of campus program reviews have been provided annually to the Trustees, and those summaries serve as the Commission's data source for this series of reports.

Since Trustee policy called on each campus to develop its own criteria and procedures, the resulting processes are highly diverse, and the purposes and uses of program review vary by campus. This diversity notwithstanding, most program reviews begin with a departmental self-study addressing specific topics and questions and sometimes including surveys of students, faculty, and alumni. When completed, the self-study may be submitted to the dean of the appropriate school, the academic vice president, and the Academic Senate. In some instances, a memorandum of understanding or plan of action is developed. An external team or individual reviewer may also be invited to campus to review the self-study; interview students, faculty, and administrators; and report on program strengths and weaknesses. At present, 13 State University campuses bring in external reviewers for each program and two for some programs. Current budget constraints may unfortunately force the campuses to reevaluate these consultant-oriented reviews.

Because each campus develops its own criteria and procedures, there is no single model for program review. Campuses are required only to establish a formal schedule of review and report the results. As noted above, some campuses do not use external reviewers. Some employ a two-year rather than one-year process. Some review all programs in a single school at one time rather than a variety of disciplinary areas. A particularly promising approach taken by some campuses is a more thorough integration of program review with program planning and campus budgeting. This academic year, for example, program review at Long Beach will be firmly linked with its strategic planning process. Copies of program review reports will be forwarded to the Financial Affairs Council, and the Office of the Provost will conduct program review hearings with the various deans prior to the campus's resource planning process in the spring. At these hearings, deans will be expected to respond to questions about funding relative to the results of the program reviews. At Northridge as well, university curriculum committees address curriculum proposals from departments in the context of program review recommendations, and San Luis Obispo uses its reviews as a basis for planning.

In addition to these institutional processes and goals, program reviews can be tied to other educational functions. The California State University's Advisory Committee on Student Outcomes Assessment recommended that program review be used to implement student outcomes assessment measures:

> The administration of each CSU campus should assist academic departments in (a) collecting, analyzing, and reporting information about current and former students' characteristics, development and attainment of degree and program goals, (b) better utilizing data currently collected by the campus, and (c) incorporating these outcome measures in academic program review (1991, p. 1).

Beginning this academic year, the Dominguez Hills campus has made student outcomes assessment an integral and important part of its academic program review process. Five faculty members attended the Student Outcomes Assessment Conference sponsored by the American Association of Higher Education during the summer of 1990; on-site workshops are being developed for other faculty; and the campus Academic Affairs Office plans to provide assigned time for faculty involved in the development of department assessment activities.

In a similar vein, the Advisory Committee to Study Graduate Education in the California State Univer-

sity has urged each campus to use regular program review and evaluation to assess the quality of its graduate programs, specifically noting that the "evaluation design should ensure that the graduate program is given specific attention separate from the other offerings of the department" and that the "program review guidelines now used at each campus should be reviewed and revised to incorporate the specific criteria and indicators of quality set forth" in the State University's Graduate Education study.

Given the Commission's historic interest in access, as well as its upcoming study on the joint doctorate, it may also be worth mentioning that many review summaries mention the need for a particular department to increase the diversity of its faculty or of its student majors and to focus its attention on curricular modifications that are responsive to diversity -- or to commend a department for already doing so. In addition, six of the program review summaries from three campuses include recommendations for the development of additional joint doctoral degree programs. While there is absolutely no assurance that such recommendations will become anything more than a gleam in the reviewer's eye, it is informative to catch sight of the gleam.

Although Barak found in 1982 that only 2 percent of the nation's colleges and universities conducting program reviews had conducted a systematic evaluation of their review process, the California State University has clearly exceeded this standard. Revised program review guidelines are being implemented this year at the Bakersfield campus, including the requirement for an external consultant, the establishment of a University Program Review Committee, and more detailed expectations for program review documents. In 1988-90, an ad hoc committee reviewed Hayward's process and recommended a number of changes. Most were adopted, including replacing their two-year process with a one-year review. A major study of program review policies and procedures is currently underway at Pomona; San Jose notes that its newly implemented program planning procedures are working effectively; and San Luis Obispo used its new guidelines only for the second time in reviewing the programs under study in this report.

According to the most recent item on academic planning and program review in the Trustees' March 1991 agenda, growing campus interest in program review has prompted the Chancellor's Office to supplement the annual report submitted to the Board of Trustees with information on campus procedures and processes, which it will then have bound and distribute to the campuses. This volume will also include chapters on integrating program review, assessment, and accreditation; the use of external reviewers; and incentives, funding, and the uses of program review. (An outline for the volume appears in Appendix H.)

Results of the processes at the two universities

The summary program review reports of the University of California and the California State University reveal the richness and diversity of the academic enterprise and the seriousness with which the campuses generally take their responsibility to determine curricular quality and effectiveness. This section would be incomplete without some indication of the reviews' readability, interest, and importance in terms of what they can tell us about a particular department and field and implicitly about higher education as a whole. Consider these four examples:

> The reviewers concluded that the . . . Department is one of the best in the country, ranking in the top five nationally; it differs from most other departments, because its programs are strongly influenced by its location in the College of . . . . It is a leader in broadening the program from . . . into new directions, such as . . . and biotechnology. The faculty is highly distinguished, but needs to diversify in terms of gender and ethnicity. The reviewers recommend that: major continuing efforts be expended to diversify the department's faculty in terms of gender and ethnicity; a detailed review of minority and women applicants for positions in the past five years be conducted to determine why none were hired; it continue to revamp its curriculum and report on the effect of the revision in the spring, 1992; the department offer financial support to foreign graduate students and occasionally to some of its best undergraduate students in order to recruit the best possible student body for quality and diversity; and the department think about being more flexible

with regard to its current policy of not admitting (campus) undergraduate students to its graduate programs.

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1. The program was found to have much potential; however, it was recommended that the structure be re-examined to consider making it only a Ph.D. program, and make curricular reform, and more stringent admissions procedures.
2. A new chair should be appointed.
3. Faculty support must be demonstrated.
4. Approval was withheld pending appointment of a new chair and satisfactory response to the recommendations.

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. . . . The faculty of the department was commended for: the reaccreditation of the undergraduate program by . . . ; implementing curricular changes reflecting the changing trends in . . . practice; developing and publicizing a new course rotation plan for students; involving students actively in professional societies; participating in the . . . competition and other applied student/faculty/staff projects; increasing the amount of external funding for research equipment and projects; and acquiring microcomputers for faculty offices and laboratories. Recommendations included: implement ways to improve the written and oral communication skills of students; implement the department recruitment plan; encourage more faculty involvement in retention activities through collaboration in areas related to the discipline -- e.g., ethics, environmental topics; enhance recent curricular efforts; conduct a study of the M.S. program using external reviewers within the next two years, and include external review of the M.S. program for their next program review; continue integration of the computer usage into the curriculum; recruit qualified African-American, Latino, and female faculty; develop long range plans consistent with the institutional and departmental mission statement and reflecting curricular, faculty hiring and other programmatic goals; continue to pursue additional funding.

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The department of . . . has suffered from the general decline of interest in sciences since the late 1960's and the 1970's. As a consequence, its enrollments and FTEs have declined at both the lower and upper division level. By contrast, graduate level enrollment has increased 12 percent. The strengths of the department of . . . include: capable and dedicated leadership; highly trained and broadly knowledgeable faculty; recognition of the importance of faculty-student cooperation in research; and intelligent curricular planning. Cited weaknesses include: persistent low enrollments that reduce the department's faculty allocation and threaten to restrict its ability to carry specialized courses; a serious shortage of space for teaching and for research; a lack of research time and funds; and a lack of important new equipment and the increasing obsolescence of current equipment.

The program review summaries or accounts of follow-up activities sometimes reveal that admissions to a particular program have been suspended until a department's problems have been successfully resolved or that a re-review is called for or that a department has been placed on probationary status. It is rare that they result in programs actually being discontinued, however. This is not surprising given that probably less than 5 percent of the programs reviewed at a given institution are ever terminated, and these are most likely unproductive and inactive "paper programs" that are listed in the catalog and offered by faculty from another program area that is more productive, therefore involving little savings as a result of their demise (Barak and Breier, 1990, p. 62). In 1989-90, the University discontinued six academic programs and one organized research unit: the individual major in the College of Engineering, Davis; the non-degree preforestry program in the College of Agricultural and Environmental Sciences, Davis; geochemistry (B.S.), UCLA; nonrenewable natural resources (B.S.), UCLA; Russian linguistics (B.A.), UCLA; the reading specialist credential program at Riverside; and the Social Process Research Institute at Santa Barbara. In the California State University, although a number of the reviews refer to declining enrollments and degree production, only the master's degree program in cybernetic systems at San Jose will be terminated.

Although the primary goal of program review should certainly be program improvement rather than discontinuance, it does seem appropriate, especially in this time of declining fiscal resources, to evaluate programs very carefully in view of an institution's mission, student demand, societal need, and other indices. The Maryland Higher Education Commission, acting in its regulatory capacity, recently imposed new restrictions on colleges and universities seeking to add academic programs. New programs may be added only if they meet a critical regional or statewide need and if institutions show they are paying for them by discontinuing or reducing the financing of other programs or with funds from outside sources. This "start one/stop one" approach may be considered a rather draconian measure, but a spokesman for the commission explained that it was a reaction to the current financial situation in the state and that he expected the policy to remain in effect for the foreseeable future (*Chronicle of Higher Education*, March 20, 1991, p. A 25).

The process at the California Community Colleges

The Commission's program review report of October 8, 1978 -- 13 years ago -- stated that "it seems likely that more of the information necessary for evaluating curricular review procedures within the California Community Colleges will become available during the coming year."

Since 1983, when recommendations were first included in this series of Commission reports, the Commission has annually requested the Chancellor's Office of the California Community Colleges to provide a summary of program review activities on each campus for the preceding academic year.

Last year, the Commission asked the Chancellor's Office of the Community Colleges to survey a sample of colleges about their program review policies and procedures and submit those data to the Commission for this year's report, adding that comprehensive information about program review in the two-year colleges would be expected thereafter.

Recent major progress

On March 4, 1991, the Chancellor's Office submitted a detailed, comprehensive, useful, conceptually thoughtful, and well-written report, *Instructional Program Review in California Community Colleges*, to Commission staff. The report documents how instructional program review occurs in the colleges, and because of its importance the study's methodology and major findings are summarized below.

Two developments in the Chancellor's Office fortuitously coincided with last year's Commission's request:

1. The Educational Standards and Evaluation Unit identified the need to study local program review as a way to meet its own responsibilities for curriculum oversight as defined in statute and regulation; and
2. The Community College Reform Act of 1988 (AB 1725), focused attention on program review by requiring an accountability report from the colleges.

Thus empowered to involve itself more directly in the process of curricular review than has been its practice heretofore, the Chancellor's Office sent a memo (Appendix I) in December 1990 to all colleges requesting information on program review policies, procedures, and schedules and asking them to submit any review format, questionnaire, or instrument which had been adopted.

Responses to the survey

The request went to 107 colleges, including the San Francisco Centers, a noncredit institution. By February 15, the Chancellor's Office had received 82 responses representing 91 colleges for an 85 percent response rate. (By the end of March, only one college had not responded, and the data are being updated by Chancellor's Office staff.) The findings in this report are based, however, upon the earlier responses.

Subtracting four inadequate or ambiguous responses for a universe of 78 responses representing 85 colleges, the survey indicates that approximately 72 percent of the community colleges possess formal, developed program review processes, while 28 percent do not. Most of the "no process" responses were of two types: (1) some colleges believe that ongoing administrative processes like class scheduling, budgeting, catalog preparation, planning, and the like, suffice for program review, but (2) the vast

majority indicated that they were in some stage of formulating a program review process or instrument. The substantial number of these latter colleges may be a result of the particular attention now paid to program evaluation by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges through Standard 2B.2 that states:

> The institution engages in periodic review of program and departmental quality and effectiveness under clearly specified and demonstrably implemented procedures. The process is based on current qualitative and quantitative data which are used to assess strengths and weaknesses in achieving program purposes and projected outcomes.

Findings from the survey

The Chancellor's Office report posits several generalizations about the responses that can be paraphrased as follows:

1. There is no consistency of format or language among the materials received which made analysis difficult with every institution seeming to invent a program review process for itself.
2. A large number of colleges said their processes were undergoing major change, including some who had suspended reviews.
3. In many colleges, program review is overseen by a committee usually with diverse representation and part of the governance structure of the institution.
4. The use of program review results is a difficult issue on some campuses.
5. Many colleges review some combination of instructional programs, student services (e.g., counseling), and administrative operations (e.g., admissions and records). Policies and procedures are often written to cover both instruction and services but review instruments less often.
6. A number of responses indicated that in addition to regular reviews, there exists a more intensive type of review that is triggered by such factors as a severe decline in productivity or major enrollment growth.
7. Although staff accrued a checklist of components that were found in each submission, the list could not begin to accommodate the complexity and differences among the responses.
8. In those colleges who specified how often program review occurred, about one-third reviews programs every five years, somewhat less than a third reviews all programs annually, and somewhat more than a third reviews programs on a cycle somewhere between every year and every five years.

After reading many of the policies and procedures, Chancellor's Office staff characterized four genres or types of program review that served initially as a sorting device and later to facilitate discussion: (1) the productivity model, (2) the planning model,(3) the directive accreditation model, and (4) the nondirective accreditation model. Although the categories are not mutually exclusive, it was possible to sort the responses by the one approach that appeared to be most marked in a particular college's review procedures. The following descriptions of each genre are taken almost verbatim from the report.

The productivity model: The productivity model focuses on the number of Weekly Student Contact Hours (WSCH), Average Daily Attendance Units (ADA), and/or amount of revenue generated by the program compared to the number of full-time-equivalent faculty members (FTE) and/or program costs. This model also compares the program's performance to the college average and/or statewide average for similar programs and often to a goal figure.

The planning model: The planning model focuses on the program's future as much as, or even more than, its past. It typically emphasizes requests for changes in the level of staffing, program budget, equipment and supplies, and support services, as well as requests for expanded or improved facilities. It also typically emphasizes how the program will address institutional priorities.

The accreditation models: The accreditation models usually state the purposes of the review in broader, more general terms than the productivity or plan-

ning models. They resemble an accreditation report in that they typically cover a considerable breadth of standards or criteria, including curriculum relevance, teaching methodologies, student outcomes, faculty perceptions, linkages to other entities, and the like. This genre generally calls for narrative discussion of statistical data and includes both self-study and validation processes.

- The directive accreditation model includes a relatively long list of specific indicators to be addressed for each standard or criterion and generally calls for more research or data.
- The nondirective accreditation model employs a shorter list of standards or criteria and asks more subjectively worded questions about how well the program is succeeding regarding each.

The report continues with a fuller discussion of each category or genre, using examples of program review documents from specific colleges to elucidate each. It then moves into the special case of vocational program evaluation in the community colleges, pointing out that the system received over $32 million from the federal government in 1988-89 to improve the quality of its vocational education and that the Perkins Act contains a number of different and ambiguous requirements for the evaluation of programs supported by these funds. One section of the act requires an assessment of vocational programs by the State every two years; another requires assurances that at least 20 percent of eligible recipients are evaluated every year; while yet another section requires, without specifying a schedule, that measures be developed for determining whether the programs and the skills taught reflect a realistic assessment of the labor market needs of the State.

Beyond these federal requirements, there is also a State law that requires each community college district to review every vocational program initiated after 1979 every two years and to terminate those programs that are not effectively meeting documented labor market needs. Despite these mandates, the State Auditor General concluded in 1987 that "Community college districts . . . do not always complete the evaluations of courses and programs, as required by law."

The Chancellor's Office Vocational Education Unit submits an annual performance report to Washington in partial satisfaction of the requirements in the federal act. *Instructional Program Review in California Community Colleges* characterizes these annual performance reports as one of the few sources of statewide program evaluation information for the community colleges. It also describes a series of efforts undertaken by the Chancellor's Office to fulfill all the program review requirements of federal and State law regarding vocational education.

The report then ends with a series of recommendations having to do with continuing to study instructional program review, distribution of the final version of the report, construction of one or more exemplary program review models that can be voluntarily adopted by colleges, exploring the technical means for gathering actual results from local program reviews, the desirability of standardized procedures and instruments for all colleges within a multi-college district, and sharing of reports between the Vocational Education Unit and the Educational Standards and Evaluation Unit in the Chancellor's Office.

Instructional Program Review in California Community Colleges is clearly a baseline study. Possible definitional, conceptual, and methodological problems notwithstanding, it is the first comprehensive attempt to obtain and to analyze in any systematic way information about program review in the community colleges. The Commission fully supports this break-through effort and encourages the Chancellor's Office to continue its work in the area so that the Chancellor's Office can report to the Commission those programs reviewed each year by each college and the results of those reviews.

5 *Recommendations*

THIS FINAL PART of the report is divided into two sections, the first of which deals with the responses of the segments to 11 of the 13 recommendations made in last year's report. The second section focuses on the remaining two recommendations -- both concerned with the need for a statewide intersegmental planning framework. This year's new recommendations are highlighted in bold. For reference, a copy of last year's recommendations may be found as Appendix J.

Progress and follow-up on last year's recommendations

Recommendation One: Projected programs from sample of community colleges in 1991 and comprehensive information in 1992 and thereafter.

As noted on page 8 of Part Two of this report, the Chancellor's Office did not provide this information but has assured the Commission staff that its work on program identification and a new *Program Standards Handbook* will enable it to meet this goal in the future. Therefore, **the Commission requests that the first component of this recommendation, data from a sample of colleges, be submitted for the 1992 report and the second component, comprehensive data, for the 1993 Commission report.**

Recommendation Two: Statewide intersegmental planning framework.

This recommendation is discussed at length on pages 35-36 below.

Recommendation Three: Quarterly reports from segments.

In a March 7, 1991, memo from the Office of the President, the University of California has agreed to send Commission staff those monthly status reports they already prepare on new program proposals. These will be in addition to the quarterly reports on academic program changes which are already transmitted to the Commission. The California State University has been providing a status report on new program proposals at approximately monthly intervals. **While the Chancellor's Office of the California Community Colleges has provided oral reports to the Intersegmental Program Review Council, the Commission requests that written quarterly reports on the status of all new program proposals also be submitted.**

Recommendation Four: Information-only data from the University of California.

The University began complying with this request in May 1990, thus giving the Commission comparable data on new programs from both universities.

Recommendation Five: Sufficient documentation in proposals.

The California State University plans to develop a new proposal format for graduate degree programs by Summer 1991, incorporating some new items as a result of the recommendations in the study of graduate education in the State University. This work, together with that undertaken to arrive at an intersegmental planning framework, may serve as a model for all segments. **The State University is asked to share its ideas and approaches with the other segments through the Intersegmental Program Review Council, whose work on revising guidelines and procedures noted below should include ways of improving the documentation submitted by the segments in proposals for new programs.**

Recommendation Six: Early monitoring of programs with which the Commission has concurred with reluctance.

The California State University has complied fully with this recommendation, agreeing to collect infor-

mation about the program under consideration within two years of implementation. The University of California has responded that it will depend on its regular program reviews rather than implementing early reviews. Commission staff has concluded that it is premature to require the California Community Colleges to comply with this recommendation until its own responsibilities for program review have been more fully developed. The segments' responses to this recommendation are discussed more fully on pages 18-19 of Part Three above.

Recommendation Seven: Assurance that all programs in the universities can be reviewed every five to seven years.

It appears that the Chancellor's Office of the California State University has a well-developed process in place to ensure timely review of programs by the campuses, including a new database which will more easily permit identification of intervals between program reviews. The response from the University of California does not indicate any mechanism at the systemwide level to ensure regular and timely review. Given the protracted nature of the review process on some campuses, as well as the large number of programs that necessarily exist in a comprehensive university today, Commission staff question if the entire curriculum can indeed be reviewed every five to seven years. **Therefore, the Commission requests that the University of California report next year on whether review of the curriculum can occur in that time span on every campus.**

Recommendation Eight: Revision/completion of segmental guidelines on program review.

As noted on page 27 in Part Four of this report, the California State University is issuing a report on program review to its campuses later this year. The University has responded that its guidelines will be compiled as staff time becomes available. As stated in last year's report, the *Handbook for the Coordinating Committee on Graduate Affairs* needs revision, along with a program review handbook originally issued by the Office of the President over ten years ago. The Commission's report also stated: "This elemental step may encourage increased effectiveness and consistency of a process that while depending to a great extent on campus initiative and concern can also benefit from guidance and direction from a central source, and the Commission strongly supports such an effort." Therefore, **the Commission renews its request that revision of both University documents be made a high priority by both the Academic Senate and the Office of the President.**

Recommendation Nine: Program review policies and procedures from a sample of community colleges in 1991 and comprehensive information thereafter.

As discussed extensively in Section Four, pages 29-31 of this report, the Chancellor's Office of the California Community Colleges compiled data from all the colleges about how program review is done and is beginning a process to continue its work so that it can meet not only the spirit but the letter of this recommendation. **The Commission strongly urges the Chancellor's Office to move expeditiously on the recommendations in the Community Colleges program review report. Further, the Commission urges Chancellor's Office staff to use the expertise of the Intersegmental Program Review Council in determining how to put into place a reporting mechanism both from the campuses and to the Commission regarding program review.**

Recommendation Ten: Systemwide reviews.

The University is currently engaged in a systematic multi-year review of professional education programs. Reviews of management, law, engineering, and education are either in progress or about to begin; staff reviews of smaller professional education programs are also in progress. As previously noted in this report, the California State University recently completed a study on its engineering programs. Current plans are to hire a consultant during the Spring 1991 term to report on the fine and performing arts in the State University as part of an intersegmental review of this area. The Chancellor's Office of the California Community Colleges states that this recommendation has been regularly carried out by the Division of Vocational Education and Employer Based Training, submitting as examples studies on agriculture and natural resources and associate degree in nursing programs. It says also that the effectiveness of any effort to do program review by the Chancellor's Office (presumably beyond that already done by the vocational educa-

tion unit) depends on completion of the program identification effort described earlier, of which the implementation of the Management Information System is a key element. **The segmental offices should continue to undertake as many system-wide reviews as internal resources allow and continue to discuss the results of these reviews with the Intersegmental Program Review Council in the interest of long-range planning.**

Recommendation Eleven:
Intersegmental program reviews.

This recommendation is related to the statewide intersegmental planning framework discussed below.

Recommendation Twelve: Academic program planning and review in selected sample of independent colleges and universities.

As reported on page 2 in Part One of this document, the Commission staff plans to undertake this activity later this spring and has obtained the explicit support and assistance of the President of the Association of Independent California Colleges and Universities in the effort.

Recommendation Thirteen:
Report on progress of segments.

The responses of the segments to last year's recommendations constitute this section of the report. **Commission staff should report progress on this year's recommendations in the 1992 report.**

Statewide intersegmental planning framework

Two years ago, the 1989 report in this series reviewed the Commission's evolving role in program evaluation and suggested that after 12 yearly reports about the topic, it seemed reasonable to pause for some historical stock-taking. It encouraged the development of a context for thinking about program review in relation to the Commission's other priorities and in light of the State's needs and asked somewhat rhetorically how program evaluation in all segments could be better linked to long-range strategic planning, budgeting, coordination, accreditation, institutional research, and economic development issues. The report recommended that in the interest of clarifying and focusing the Commission's role that staff explore how its program evaluation function might be strengthened (although the word "improved" now appears to be more appropriate).

In its 1990 report, the Commission recommended development of a statewide intersegmental planning framework, given the increasing number of projected programs in fields with an already significant number of existing programs, like the fine and performing arts and engineering. Segmental and intersegmental reviews were proposed as one way to develop this framework, and another recommendation suggested that the Intersegmental Program Review Council consider assuming an intersegmental review in a discipline area with a significant number of projected and existing programs.

During the past two years, as the Council has attempted to meet more regularly, extended discussion has occurred on the appropriate roles of the Commission and of the segments; about the need for better integration between program planning, approval, and review; and about the relationship between academic program evaluation and other administrative functions such as enrollment planning, budget planning, facilities planning, and the like. In addition, Commission staff has continued to express concerns about the large number of projected programs in disciplinary areas where significant resources are already being spent on existing programs and concern about concurring with programs on an ad seriatim basis without any larger context.

Hence, Commission staff recommended that a statewide intersegmental planning framework be developed. The need for such a framework has become both more obvious and more acute in the last several months as colleges and universities in the State have reeled under the contradictory pressures of increasing enrollments and decreasing resources. Although consensus may exist among the segments for such a framework conceptually, there is need for continued discussion about what a framework means operationally. Such a planning framework could, for example, incorporate ways of examining questions like the following:

- Given projected population growth and employment forecasts, what program areas are likely to be oversubscribed in the State?

- Are there program areas where in the long term there may be excess capacity?
- How well do the segmental and institutional academic plans correspond to these anticipated program needs?
- How are academic programs helping to meet the goals of equity and student access?
- How can curricular innovation continue to be encouraged at a time of fiscal constraints?

A major step in operationalizing the framework can be achieved by reviewing and revising the Commission's guidelines and procedures, as well as those of each segment. Therefore, the Commission recommends that this work be undertaken by the Intersegmental Program Review Council in the coming year; that the effort be informed by the practices of other states as well as the independent institutions in California; and that staff advise the Commission about the Council's progress in next year's report in this series.

Appendix A

The Commission's Role in the Review of Degree and Certificate Programs

THE COMMISSION'S ROLE IN THE REVIEW
OF DEGREE AND CERTIFICATE PROGRAMS

CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

1020 TWELFTH STREET, SACRAMENTO, CALIFORNIA 95814

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PREFACE

The emergence of state-level governing and coordinating boards as participants in the determination of higher education policies is a relatively recent phenomenon, a majority of these agencies having come into existence since 1960. (A notable exception, of course, is the New York Board of Regents, created in 1784.) Given the diverse history and present circumstances of collegiate education in the various states, it is not surprising that these state-level agencies are far from uniform in structure and function. Despite variations in function, however, almost all of them are involved in one way or another with the review of academic and occupational programs.

Approaches to program review are conditioned primarily by whether the agency is a regulatory body or merely an advisory body--whether, in other words, it has authority to approve or veto individual programs or only to recommend for or against them. The number of state-level agencies with regulatory powers in program review has grown dramatically since 1960 when only 19 governing and coordinating boards had such authority. As of 1978, state-level agencies in 39 states had approval or veto authority.

California, therefore, is among a shrinking minority of states in which the state-level coordinating agency remains advisory in matters relating to the review of new or existing degree programs. As usual, however, simple comparisons with practices in other states are difficult and often misleading because of special circumstances in California. Few states, for example, have a blueprint which delineates the functions of public colleges and universities as precisely as does the California Master Plan. No state is comparable to California in the size and scope of its public higher education enterprise. But perhaps most important, the three public segments of higher education in California each operate through a central administration which has program review responsibilities. In most other states, no similar level of administration separates all the public campuses from the statewide governing or coordinating board.

Recognizing these differences and aware that there were few, if any, precedents in other states to be guided by, the Coordinating Council for Higher Education in the late 1960s moved to formalize its involvement in program review by drawing up guidelines which identified goals for the review process and outlined procedures to be followed by the Council in its relationship with segmental offices. When finally adopted in March 1971, these guidelines provided for annual Council review of segmental academic plans and of programs outside the "core" which had not appeared in the academic plan for the previous two years or which required additional staff, equipment, or funds to initiate. ("Core" programs were those which

segmental and Council staff agreed in advance were essential to the basic curriculum of a comprehensive campus.) The document did not specify what information academic plans or proposals should contain, nor what criteria were to be applied by the Council in its review, indicating that agreement on these and other essential details was to be reached between Council and segmental staff.

The bill establishing the California Postsecondary Education Commission (AB 770, Statutes of 1974) contained explicit references to a program review responsibility, making clear, however, that the Commission's role was to "review and comment" on programs. An ad hoc committee of the new Commission, after hearing testimony from a wide range of sources, directed the staff to prepare a statement on guidelines and procedures that would incorporate elements of the existing review process which the committee deemed important.

The new guidelines, adopted by the Commission in 1975, borrowed from the Coordinating Council's earlier document but shifted its emphasis from the review of individual program proposals to the review of long-range segmental plans that listed programs projected for two to five years hence. The document also established the Intersegmental Program Review Council and assigned it a central role in advising the Commission on all matters relating to program review. Finally, the 1975 guidelines called attention to the importance of campus and segmental review of existing programs and attempted to establish a framework for monitoring such reviews at the state level. Since that time, recognition has grown nationally that insuring rigorous review of existing programs is at least as vital a concern for state agencies as coordinating the growth of new programs. However, the proper role for state agencies, especially advisory bodies, in this activity has been especially difficult to define.

After five year's experience with the 1975 guidelines, it seemed timely to reexamine their effectiveness and to review their appropriateness to the altered conditions of the 1980s. The Commission therefore engaged Frank Bowen and Lyman Glenny to evaluate state-level program review practices in California. Their report, Quality and Accountability: An Evaluation of Statewide Program Review Procedures, presented to the Commission in April 1981, was based on extensive consultation with Commission staff and with administrators and faculty committees in all segments. Their recommendations tended to endorse the directions outlined in the 1975 guidelines: (a) they called for greater attention in the review process to State and segmental master plans, including institutional mission statements, and less attention to individual program proposals; (b) they encouraged continuing efforts to refine the review of existing programs; and (c) they recommended periodic intersegmental reviews of selected program areas. Their study provided an excellent context for Commission reconsideration of the

1975 guidelines and procedures. During mid-1981, sev :al drafts of the revised guidelines were widely reviewed by repr entatives of the segments of California higher education. The pres .t version was adopted at the December 1981 meeting of the Commission

The goal of all the discussions and of the followin document has been to contribute to a process that will insure, w h economy of means, the greatest possible variety of quality hig :r education programs for Californians.

THE COMMISSION'S ROLE IN THE REVIEW OF DEGREE AND CERTIFICATE PROGRAMS

I. LEGISLATIVE MANDATE FOR THE COMMISSION'S ROLE

In establishing the California Postsecondary Education Commission as the statewide planning and coordinating agency for postsecondary education, the Legislature recognized the review of academic and occupational programs as one of the central functions of the Commission. Among the agency's other functions and responsibilities, these relating to program review are designated:

1. *It shall require the governing boards of the segments of public postsecondary education to develop and submit to the commission institutional and systemwide long-range plans in a form determined by the commission after consultation with the segments.*

2. *It shall prepare a five-year state plan for postsecondary education which shall integrate the planning efforts of the public segments and other pertinent plans . . . . In developing such plan, the commission shall consider . . . (b) the range and kinds of programs appropriate to each institution or system . . . [and] (g) the educational programs and resources of private postsecondary institutions . . . .*

6. *It shall review proposals by the public segments for new programs and make recommendations regarding such proposals to the Legislature and the Governor.*

7. *It shall, in consultation with the public segments, establish a schedule for segmental review of selected educational programs, evaluate the program review processes of the segments, and report its findings and recommendations to the Governor and the Legislature.*

8. *It shall serve as a stimulus to the segments and institutions of postsecondary education by projecting and identifying societal and educational needs and encouraging adaptability to change.*

11. *It shall periodically review and make recommendations concerning the need for and availability of postsecondary programs for adult and continuing education.*

13. *It shall maintain and update annually an inventory of all off-campus programs and facilities for education, research and community services operated by public and private institutions of postsecondary education (Education Code: Chapter 1187, Section 22712).*

II. GUIDING PRINCIPLES

In a system of postsecondary education consisting of a diversity of institutions offering a wide range of programs and services, the review of plans and programs must be guided by a concern for the broad public interest. It must encourage programs that will increase the knowledge and skills of individual citizens and be accessible to everyone with the ability and desire to benefit from them. It must support programs and activities that promise to advance the frontiers of knowledge. And it must seek to foster quality within each segment and institution, preserving institutional identity, initiative, and vitality in the process.

At the same time, it must be alert to possible unnecessary duplication of effort, excessive costs, and inefficiencies in the allocation of resources.

As defined in statute, the Commission's role in the review process is advisory. The Commission's recommendations will be based on criteria which, to varying degrees, should guide the process at all levels. While all of the criteria listed below must be taken into account, they cannot be assigned fixed weight in determining the need for every degree or certificate program. The criteria to be employed by the Commission in defining the public interest as it relates to academic and occupational programs, not necessarily listed in order of importance, are the following:

1. Student Demand

Within reasonable limits, students should have the opportunity to enroll in programs of study in which they are interested and for which they are qualified. Therefore, student demand for programs, indicated primarily by current and projected enrollments, is an important consideration in determining the need for a program.

2. Societal Needs

Postsecondary education institutions bear a responsibility to fulfill societal needs for trained manpower and for an informed citizenry. Even though projecting manpower needs is far from being an exact science, such projections serve as one indication of the need for an existing or proposed program. As a general rule, employment prospects for graduates constitute a more important consideration in those programs oriented toward specialized occupational fields; with certificate or associate degree programs, the local employment market tends to be more significant than in the case of graduate programs where the state and national manpower situation assumes more importance. Recognizing the impossibility of achieving and maintaining a perfect balance between manpower supply

and demand in any given career field, it nevertheless is important to both society and the individual student that the number of persons trained in a field and the number of job openings remain in reasonable balance.

3. Appropriateness to Institutional and Segmental Mission

Programs offered by any institution within a given segment must comply with the delineation of function for that segment set forth in the California Master Plan, as well as with its own statement of mission and special emphasis approved by the segmental governing body.

4. The Number of Existing and Proposed Programs in the Field

An inventory of existing and proposed programs, compiled by the Commission staff from the plans of all segments of postsecondary education, provides the initial indication of apparent duplication or undue proliferation of programs, both within and among the segments. The number of programs alone, of course, cannot be regarded as an indication of unnecessary duplication. Programs with similar titles may have varying objectives; the regional distribution of programs in public institutions is a consideration; and the level of instruction is a factor. In general, each program should be evaluated in relation to all other programs in the subject in order to ascertain if the program under review represents a responsible use of public resources.

5. Total Costs of the Program

The relative costs of a program, when compared with other programs in the same or different program areas, constitute another criterion in the program review process. Included in the consideration of costs are the number of new faculty required and the student/faculty ratios; and the equipment, library resources, and facilities necessary to conduct the program. For a new program, it is necessary to know the source of the funds required for its support, both initially and in the long run.

6. The Maintenance and Improvement of Quality

The public interest demands that educational programs at all levels be of the highest possible quality. While primary responsibility for the quality of programs rests with the institution and the segment, the Commission, for its part, is interested in indications that high standards have been established for the operation and evaluation of the program. In the process, it is necessary to recognize that a proper emphasis on quality may require more than a minimal expenditure of resources.

7. The Advancement of Knowledge

The program review process should encourage the growth and development of creative scholarship. When the advancement of knowledge seems to require the continuation of existing programs or the establishment of programs in new disciplines or in new combinations of existing disciplines, such considerations as costs, student demand, or employment opportunities may become secondary.

III. DEFINITIONS

Program

An academic or occupational program is a series of courses arranged in a sequence leading to a degree or certificate.

Program Plan

An academic or occupational program plan contains at least an inventory of the programs offered or projected by the campuses within a segment or by a group of independent or private institutions, including a proposed timetable for the implementation of projected programs. A plan should also indicate any special curricular emphases approved for individual campuses, and may also contain narrative descriptions of problem areas, program trends, future needs, and other matters relating to academic planning. In general, academic plans are prepared for five-year periods and revised and updated annually.

Program Proposal

A program proposal is a document prepared by a campus describing and justifying the need for a degree or certificate program it wishes to establish.

Research Center or Organized Research Unit

A research center or organized research unit is a formal organization created to manage a number of research efforts within a university or segment.

Intersegmental Program Review Council

The Intersegmental Program Review Council is an advisory body whose function is to assist the staff of the Commission in coordination and review of academic plans and programs. The Council will consist of designated representatives from the office of the President of the

University of California, the office of the Chancellor of the State University and Colleges, the office of the Chancellor of the California Community Colleges, the California Postsecondary Education Commission, and of a representative designated by the Association of Independent California Colleges and Universities. The Council will also consult, on appropriate issues, with representatives from the State Department of Education, the Commission on Teacher Preparation and Licensure, the Council for Private Postsecondary Education, and the California Advisory Council on Vocational Education.

Segmental Staff

Segmental staff refers to the designated representatives of the chief executive officers of the segments.

Commission Staff

Commission staff refers to the designated representatives of the Director of the Commission.

IV. COMMISSION REVIEW OF PROGRAM PLANS

Commission staff will participate in the annual program planning cycle with each of the public segments and will prepare an annually revised State Program Plan. The six major steps in this yearly cycle are outlined below.

Step One: Segmental Preparation of Five-year Program Plans

By July 1 each year, segmental offices will prepare a five-year academic and occupational program master plan for their segment and submit a copy of this plan to the Commission staff. This master plan should contain a systemwide inventory of existing graduate and undergraduate degree and certificate programs and organized research units, along with a list of projected degree or certificate programs and research centers planned for establishment during the next five years. The list should be accompanied by a brief statement (roughly one page) for each projected program containing a description of the program and the reasons for proposing it, the relationship of the program to existing programs and to the mission of the campus, its new staff and facilities requirements, and the possible date for the program's initiation.

In addition, this segmental program master plan should indicate what existing programs on each campus are scheduled for review during each

of the next two years. It should also identify campuses that have been designated as centers for the special development of certain curricular areas, comment on fields of study in which supply and demand imbalances may be developing, and discuss any other issues related to program review the segment chooses to single out for attention.

Step Two: Commission Staff Review of Segmental Plans

By August 15, the Commission staff will integrate the segmental plans and prepare a draft of a five-year State Program Plan, identifying potential problem areas. In its review and integration of segmental plans, Commission staff will take into account the criteria of need listed on pp. 2-4 above and will be alert to other issues arising from an examination of segmental plans from an intersegmental perspective.

Step Three: Intersegmental Review of Draft State Program Plan

By October 1, the Intersegmental Program Review Council will meet to refine the State Program Plan and attempt resolution of issues. The Council will consider possible conflicts among the academic master plans of the segments, review Commission staff recommendations, and advise Commission staff on other matters relating to the preparation of the State Program Plan, including needed manpower and related curricular studies which should be undertaken by the Commission.

Step Four: Commission Staff Revision of Draft Plan

By December 15, in consultation with the Council, Commission staff will prepare a revised draft of the State Program Plan, including issues that the Council was unable to resolve, for presentation to the Commission for its review and consideration.

Step Five: Commission Action on Plan

By January 15, after discussion and possible amendment of the plan prepared by the staff, the Commission will adopt the final version of the State Program Plan and submit it to the Governor and Legislature.

Step Six: Segmental Revision of Five-Year Program Plans

Finally, the segments should consider revising their five-year program plans in harmony with recommendations in the State Program Plan as adopted by the Commission.

V. COMMISSION REVIEW OF PROGRAM PROPOSALS

By a careful screening of projected programs listed in the segmental program master plans, Commission staff expects to reduce the number of detailed proposals for individual programs it reviews intensively. If the Commission staff has not challenged a projected program appearing in a segmental master plan for at least two years immediately prior to its intended implementation date, concurrence by Commission staff is to be assumed. If a proposed program has not appeared in the segmental master plan, or if the need for the program has been questioned by Commission staff in the State Program Plan, Commission staff will review the proposal as follows:

Step One: Segmental Preparation of Program Proposal

Segmental offices will submit information in a mutually agreeable form about proposed programs to the Commission staff for review. All proposals for programs to be initiated in the fall term should be submitted to the Commission staff before March 15. The deadline for proposals for programs scheduled to begin in the winter or spring term is October 15.

Segmental staff will also notify the Commission of their approval of program changes that do not require Commission staff review (such as proposed programs that have been projected in the segment's program plan for at least two years, changes in name, options, or areas of concentration within a program) by forwarding a brief description of the approved change to the Commission staff for its information.

Step Two: Commission Staff Review of Proposal

Commission staff will review the proposal in accordance with the criteria stated on pp. 2-4 above. If the staff does not comment on the proposal within 60 days after it is received, concurrence with the segmental recommendation for approval is to be assumed. The Commission staff will direct questions regarding the proposal to the segmental office rather than to the campus or program staff directly involved, or will consult the segmental office before communicating with a campus.

Step Three: Segmental Review of Commission Staff Recommendation

If a segment disagrees with a recommendation from the Commission staff regarding a program proposal, either party may bring the proposal to the Commission for its review and comment.

Step Four: Commission Action on Proposals

In accordance with its legislative mandate, the Commission will report its actions regarding proposals to the Legislature and the Governor, usually in the form of a summary of program review activities prepared in November or December of each year.

VI. COMMISSION PARTICIPATION IN THE REVIEW OF EXISTING PROGRAMS

The public interest in program review on the campuses of public institutions requires assurance that all academic and occupational programs are reviewed regularly and that the reviews are reasonably rigorous and objective. Since a systematic evaluation of existing degree programs is an essential part of the academic process, the responsibility for the quantitative and qualitative review of existing programs must rest with the campus and the segments. But because of its mandate to establish a schedule for segmental review of selected educational programs and to evaluate the program review processes of the segments (Item 7, p. 1 above), the Commission will promote the adoption of a schedule on each campus and encourage consistency in the structure and thoroughness of the review procedures. The Commission's interest in segmental review procedures, therefore, will be directed toward these ends:

a. To make certain that systematic review of existing programs is occurring on all campuses within each of the segments;

b. To suggest if necessary, and in consultation with the Intersegmental Program Review Council, procedures to be followed in reviewing programs and in reporting the results of those reviews; and

c. To evaluate periodically the effectiveness of the program review practices of the segments.

The Commission staff will seek to achieve these ends in two ways: through (1) its evaluation of regular segmental reviews of existing programs, and (2) its encouragement of special intersegmental reviews of selected program areas, as follows:

Steps in the Evaluation of Regular Segmental Reviews of Existing Programs

The Commission staff will request the segments to submit by November 1 each year a summary of program review activities at the campus and systemwide levels during the most recent academic year. The summary

should report: (a) what programs and program areas were reviewed; (b) what kind of review was conducted (i.e., regularly scheduled review of program or department, standard review of recently initiated program, special review of program with problems, review of curriculum in preparation for accreditation visit, etc.); (c) who conducted the review; (d) what criteria were used to evaluate the program (i.e., enrollment and placement records, caliber of staff, relation to similar programs on campuses within the segment and in other segments, etc.); (e) what were the significant conclusions; and (f) what actions resulted from the review (continuation, modification, termination, or other).

The summary report should also list all programs terminated on each campus during the academic year.

Steps in the Encouragement of Special Intersegmental Reviews

In addition to reporting on the annual program review activities within the segments, Commission staff, in consultation with IPRC, will recommend a field, or fields, of study to be reviewed concurrently by all the segments during the following year. This special review is not intended to interfere with or replace any other reviews of existing programs routinely carried out by the central offices of the public segments or by their individual campuses. Indeed, such reviews may supply all information necessary for the intersegmental survey. The purpose of the intersegmental review is to establish a comprehensive body of information which should lead to more informed judgments concerning curricular issues at all levels of planning.

The intersegmental review should help answer some of the following questions:

a. Do the degree or certificate programs within the field appear to be overproducing or underproducing graduates for the related job market?

b. Do degree or certificate programs within the field represent appropriate adherence to the principle of differentiation of function?

c. What articulation or career ladder provisions are in effect within the program area?

d. What developments within related occupational fields have implications for educational programs?

The Commission staff, in consultation with the Council, will select the program area or areas to be reviewed. The selection will be based on the following considerations:

a. Significant changes in enrollment over a five-year period;
b. Uneven regional distribution of programs;
c. Large number of projected programs;
d. Rapidly changing job markets for graduates of programs; and
e. Special circumstances (request from the Governor or Legislature, unusual public interest, review in one segment already planned, or other special conditions).

For those program areas selected for review, the Commission staff will request information from each segment in the following categories, as appropriate:

a. Five-year history of enrollments and degrees granted in areas under review;

b. Program costs;

c. Records of placements; and

d. Institutional comments on relation of program to institutional mission, results of recent reviews of program, importance to students, and future plans for the program.

Commission staff will be responsible for integrating the information from all the segments, for reviewing developments within the program area and related occupational fields, and for making recommendations. In those areas in which an extensive written report seems appropriate, the Commission staff will work with a specially appointed technical advisory committee in preparing the report or consider hiring a consultant to conduct the study.

VII. STAFF RELATIONSHIPS

1. Intersegmental Program Review Council

In addition to the specific functions identified in this document, the Council will serve as the established forum for the sharing of ideas, observations, and concerns among its members. Developments related to program review within any segment--for example, plans for, or the status of, systemwide reviews of a certain field of study--should be reported at IPRC meetings. The Council will function in whatever ways seem feasible to identify, discuss, and help resolve curricular issues with intersegmental implications.

2. General Relationships

Between meetings of the Intersegmental Program Review Council, Commission staff may:

a. Initiate discussion with any segment on matters of mutual interest;

b. Request information necessary for carrying out the Commission's program review responsibilities;

c. Suggest, where appropriate, cooperative programs involving two or more segments; and

d. Identify and comment on apparent unmet needs in postsecondary programs and services.

VIII. APPEAL PROCEDURE

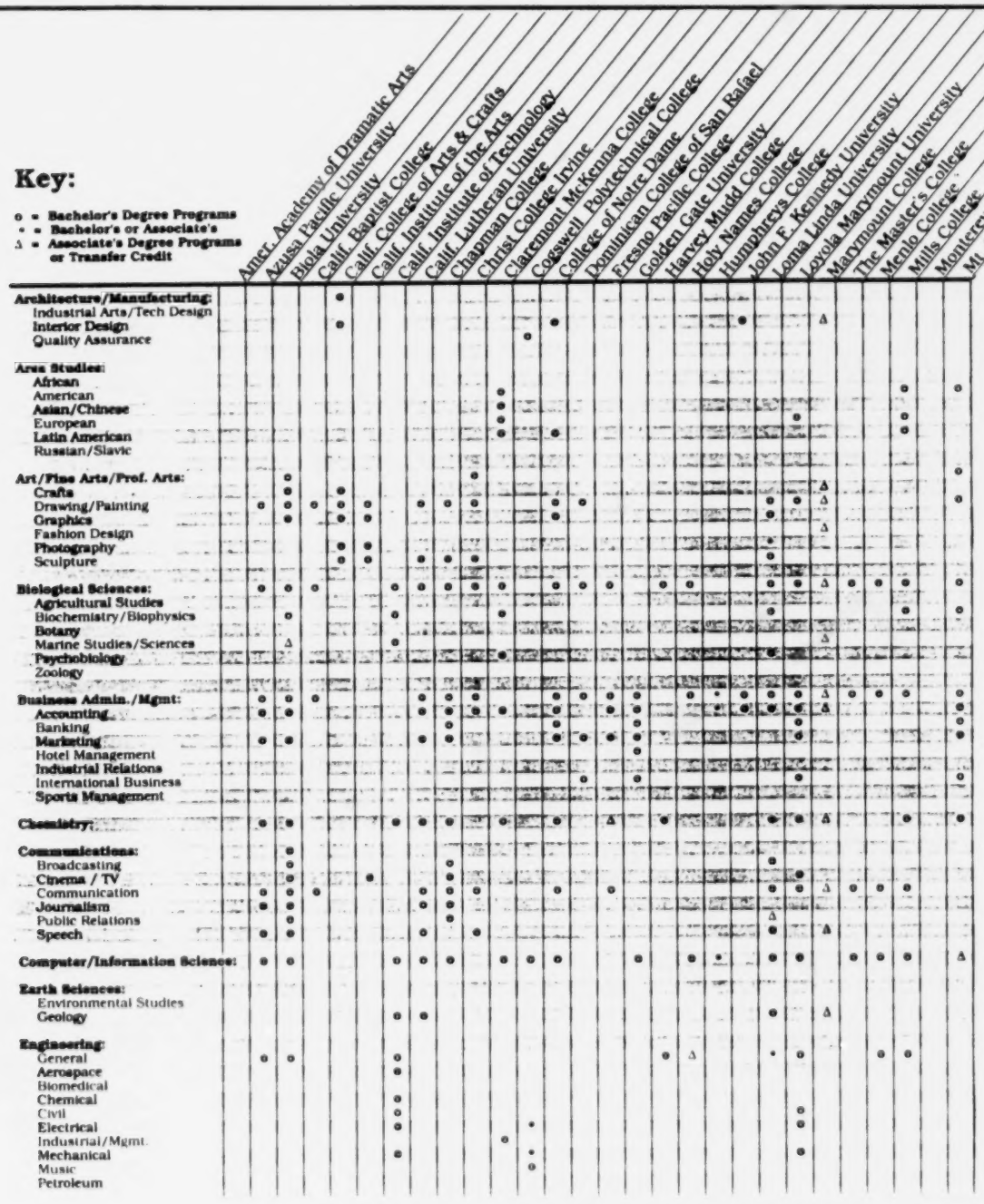
Any action or decision resulting from procedures described in this document may be appealed to the full Commission by any of the parties represented on the Intersegmental Program Review Council.

Appendix B

Undergraduate Degree Programs in California's Regionally Accredited Independent Institutions

Key:

o = Bachelor's Degree Programs
• = Bachelor's or Associate's
Δ = Associate's Degree Programs or Transfer Credit



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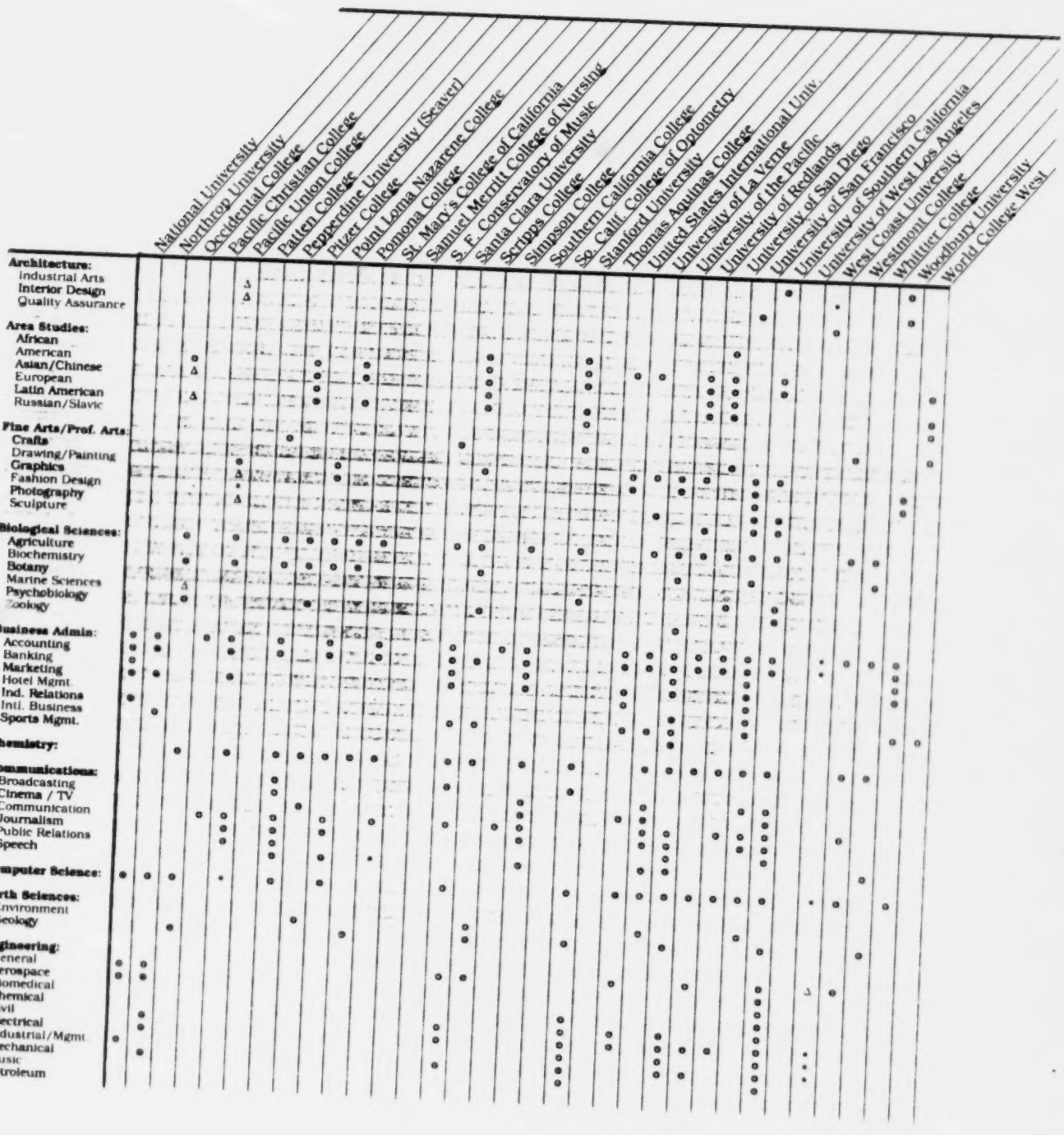

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Key:

- o = Bachelor's Degree Programs
- • = Bachelor's or Associate's
- Δ = Associate's Degree Programs or Transfer Credit

	Amer. Academy of Dramatic Arts	Azusa Pacific University	Biola University	Calif. Baptist College	Calif. College of Arts & Crafts	Calif. Institute of the Arts	Calif. Institute of Technology	Calif. Lutheran University	Chapman College	Christ College Irvine	Claremont McKenna College	Cogswell Polytechnical College	College of Notre Dame	Dominican College of San Rafael	Fresno Pacific College	Golden Gate University	Harvey Mudd College	Holy Names College	Humphreys College	John F. Kennedy University	Loma Linda University	Loyola Marymount University	Marymount College	The Master's College	Menlo College	Mills College	Monterey Institute	Mt. St. Mary's
Health Sciences:								•												o •		Δ						o
Dental Hygiene																				o								
Dietetics																				o								
Gerontology																												o
Health Svcs Mgmt																												o
Human Development			o										o				o											
Med. Records Admin.																				o								Δ
Medical Technology																				o								
Nursing		o	o									o					o			o		Δ	o					•
Optometry																												
Pharmacy																												
Physical Therapy																				o								o
Speech Pathology			o																	o								
Sports Medicine								o																				
Humanities:											o																	
Classics																				o		Δ						
Comparative Literature								o		o												Δ			o			
English Language & Literature		o	o	o			o	o	o	o	o	o	o				o			o		Δ		o	o			o
Liberal Studies								o			o	o	Δ				o			o			o					o
Linguistics																												
Philosophy		o	o					o		o	o						o			o		Δ		o	o			o
Religious Education		o	o					o	o											o								
Religious Studies/Theology		o	o	o				o	o	o	o	o					o			o		Δ	o					o
Languages:																												
Chinese																				o		Δ					o	
French							o	o		o										o		Δ			o		o	o
German							o		o										o						o		o	
Italian																												
Japanese																											o	
Russian																											o	
Spanish				•			•	o					o				o		o	Δ		Δ			o		o	o
Mathematics:		o	o								o	o		o			o		o	Δ	o	Δ	o		o			o
Performing Arts:																												
Dance					o			o												o					o			
Dramatic Arts	o											Δ					o			o		Δ			o			
Music		o	o	o			o	o	o	o	o	o					o			o		Δ	o		o			o
Physical Education:																												
Recreation		o	o	o			o	o	o			o								o			o					
Sports Management		o																		•								
Physical Sciences:			o	o					o		o						Δ			o		Δ			o			
Astronomy												Δ																
Chemistry		o	o				o	o	o		o	Δ		o			o			o		Δ			o			o
Physics							o	o		o				o						o		Δ						
Social Sciences:		o	o								o		o				o	o	o	o		Δ						o
Anthropology									o											o								
Behavioral Science		o	o	o					o		o								o	o			o					
Child Development			o										o							•		Δ		o				o
Economics			o				o	o	o										o			Δ		o				
Environmntal Studies																				o								
Ethnic Studies				•					o															o				
Geography																												
History		o	o	o			o	o	o	o	o	o	o	o			o			o	o	Δ	o	o	o			o
Home Economics																							o					
International Relations		o	o						o		o						o							o	o			
Paralegal Studies																o												
Political Science/Govt.		o		o				o	o		o	o	Δ	•			o		o	o	o	Δ	o		o			o
Psychology		o	o	o				o	o	o	o	o	o			o	o		o	o	o	Δ	o	o	o			o
Social Welfare/Service		o	o						o				o				o		o			Δ						
Sociology			o	o				o	o	o			o				o		o	o		Δ			o			o
Women's Studies																									o			

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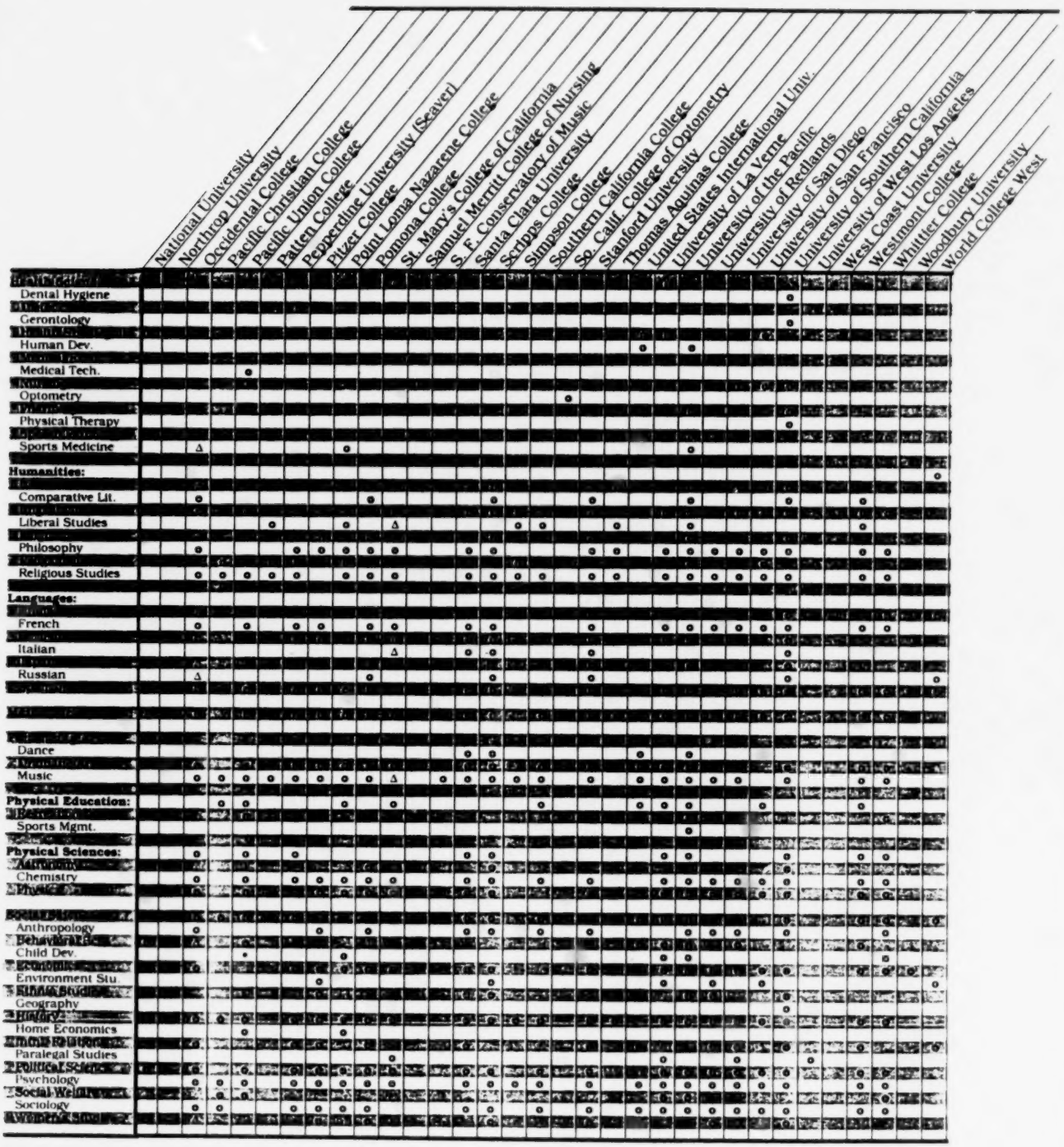

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Appendix C — Projected Programs

Note: The following list identifies alphabetically by general field of study and by campus all projected programs and their proposed initiation dates in the University of California and the California State University. Asterisks indicate those programs or degrees listed in this report for the first time. The proposed programs and research units are in various stages of development, and the University specifies the status of each as (1) early planning stage, (2) undergoing campus review, or (3) campus review completed and undergoing University-wide Academic Senate and Office of the President review.

Agriculture and Natural Resources

Fisheries Management	M.S.	UC Davis	Five yrs.(1)
Environmental Toxicology	M.S./Ph.D.	UC Santa Cruz	1991-92*(3)
Agricultural Engineering Technology	B.S.	CSU Fresno	1992*

Architecture and Environmental Design

Architecture*	M.S.	UC Berkeley	1992(1)
Facility Planning & Management	M.F.P.M.	UC Irvine	1995*(1)
Architecture	B.A./M.Arc./ Ph.D.	UC San Diego	1992*(2)
Interior Architecture	MIA	Cal Poly, Pomona	1991*
Environmental Design	M.S.	Cal Poly, San Luis Obispo	1991*

Biological Sciences

Parasitology	M.S./Ph.D.	UC Davis	1992*(2)
Population and Evolutionary Biology	Ph.D.	UC Davis	1992*(2)
Human Genetic Disease	Ph.D.	UC Irvine	1992-93(1)
Cell, Molecular, & Developmental Biology	B.S.	UC Los Angeles	1992*(1)
Genetics	M.S.	UC Riverside	1992(2)
Microbiology*	M.S./Ph.D.	UC Riverside	1992(2)
Neuroscience	Interdepartmental Ph.D. (Inter-departmental)	UC Riverside	ASAP(2)
Pharmacological-Toxicological Sciences*	Ph.D.	UC San Francisco	1992(1)
Evolution & Paleobiology	M.S./Ph.D.	UC Santa Barbara	1994*(1)
Biology*	M.S.	CSU Bakersfield	1992
CranioFacial Biology	Ph.D.	CSU Northridge/USC	1991

Business and Management

Management	Ph.D.	UC Riverside	1992*(2)
Management Information Systems	M.S.	CSU Bakersfield	1991
Human Resource Development	M.A.	CSU Chico	1992*
Accountancy	M.S.	CSU Long Beach	1992*
Taxation	M.S.	CSU Long Beach	1992*
Computer Information Systems	M.S.	CSU Los Angeles	1992*

Accountancy	M.S.	CSU San Bernardino	1992
Accountancy	M.S.*	San Francisco State Univ.	1994
Taxation	M.S.	San Francisco State Univ.	1991
Hospitality Management*	B.S.	San Jose State Univ.	1991
Business Administration	M.B.A.	CSU San Marcos	1992-2001*

Communications

Instructional Technology	B.S.	CSU Chico	1992
Telecommunications	B.S.	CSU Dominguez Hills	1992*
Graphic Communication	B.S.	CSU Los Angeles	1991
Communication	M.A.	CSU San Bernardino	1993

Computer Science

Computer Science	Ph.D.	UC Riverside	1991*(2)
Computer Science	M.S.	CSU Bakersfield	1994
Computer Science	M.S.	CSU Dominguez Hills	1992
Computer Engineering	B.S.	CSU Fullerton	1991
Computer Science	M.S.	CSU Los Angeles	1991*
Computer Science*	M.S.	CSU San Bernardino	1991
Computer Science*	B.S.	CSU San Marcos	1992-2001
Computer Science	M.S.	CSU Stanislaus	1992

Education

Education	Ph.D.	UC Davis	1991*(3)
Educational Administration	Ed.D.	UC Irvine	1991-92*(2)
Educational Administration*[1]	Ed.D.	UC Los Angeles/CSULA	To be determined(1)
Educational Administration[1]	Ed.D.	UC San Diego/SDSU	1993
Science & Mathematics Education	Ph.D.	UC San Diego/SDSU	1993*(2)
Educational Leadership*	Ed.D.	UC Santa Barbara/CSU Bakersfield	1994(2)
Education	Ph.D.	UC Santa Cruz	1992*-94(1)
Educational Administration	M.A.	CSU Bakersfield	1992*
Educational Administration	Ed.D.	CSU Sacramento/UOP	1992*
Counseling*	M.S.	CSU San Bernardino	1991
Physical Education	M.S.	CSU San Bernardino	1992
Science Education	M.A.T.	CSU San Bernardino	1991
Special Education*	M.S.	CSU San Bernardino	1991
Vocational Education*	B.S.	CSU San Bernardino	1991
Child Development*	M.A.	San Jose State Univ.	1991
Education*	M.A.	CSU San Marcos	1992-2001

Engineering

Civil Engineering*	B.S.	UC Irvine	1991(2)
Electrical Engineering*	B.S.	UC Irvine	1991(2)
Mechanical Engineering*	B.S.	UC Irvine	1991(2)
Engineering	B.S./M.S./Ph.D.	UC Riverside	1994-95(3)

1. Appears on the University of California list only.

Ocean Engineering	B.S.	UC San Diego	1992*(1)
Ocean Engineering	M.S.	UC San Diego	1994(1)
Engineering Science*	Ph.D.	UC Santa Barbara	1992(1)
Electronic Engineering	B.S./M.S.*/	UC Santa Cruz	1992-93*(1)
Construction Management	B.S.	CSU Fresno	1992*
Electrical Engineering*	M.S.	CSU Fresno	1992
Industrial Technology*	M.S.	CSU Fresno	1991
Mechanical Engineering*	M.S.	CSU Fresno	1992
Surveying Engineering	M.S.	CSU Fresno	1991
Civil Engineering	B.S./M.S.	CSU Fullerton	1991
Electrical Engineering	B.S./M.S	CSU Fullerton	1991
Mechanical Engineering	B.S./M.S.	CSU Fullerton	1991
Aerospace Engineering*	M.S.	CSU Long Beach	1991
Civil Engineering*	B.S.	CSU Los Angeles	1991
Electrical Engineering*	B.S.	CSU Los Angeles	1991
Mechanical Engineering*	B.S.	CSU Los Angeles	1991
Electrical Engineering	M.S.	Cal Poly, Pomona	1991
Aerospace Engineering*	M.S.	San Jose State University	1992
Structural Engineering	M.S.	Cal Poly, San Luis Obispo	1991*

Foreign Languages

Chinese and Japanese	A.B.	UC Davis	1991*(2)
Italian*	M.A./Ph.D.	UC Davis	1992(2)
French	Ph.D.	UC Riverside	1991-92*(2)
Japanese	B.A.	CSU Fullerton	1991*
Chinese	B.A.	San Jose State Univ.	1991*
Japanese	B.A.	San Jose State Univ.	1991*
Japanese*	B.A.	CSU San Marcos	1992-2001
Spanish*	B.A.	CSU San Marcos	1992-2001

Health

Environmental Health and Public Policy	Ph.D.	UC Irvine	1993-94*(1)
Health Care Management	M.S.	CSU Dominguez Hills	1992*
Physical Therapy	M.P.T.	CSU Fresno	1992
Public Health	M.P.H.	CSU Fresno	1992
Health Science	B.S.	CSU Fullerton	1991*
Nursing	M.S.	CSU Fullerton	1992
Gerontology	M.S.	CSU Long Beach	1991
Physical Therapy	M.P.T.	CSU Long Beach	1991
Art Therapy	M.A.	CSU Los Angeles	1992*
Genetic Counseling*	M.A.	CSU Northridge	1994
Nursing	B.S.	CSU Northridge	1991*
Physical Therapy	M.P.T.	CSU Northridge	1992
Physical Therapy*	B.S.	CSU Sacramento	1993
Speech Pathology & Audiology	B.S.	CSU San Bernardino	1992
Communicative Disorders[1]	Ph.D.	San Diego State Univ./ UC San Diego	1992
Physical Therapy	M.S.	San Diego State Univ.	1992*
Gerontology	M.S.	CSU Stanislaus	1991

1. Appears on the California State University list only.

Interdisciplinary

Area and Ethnic Studies

German Area Studies	A.B.	UC Berkeley	1993(1)
Chinese Language and Literature*	B.A.	UC Irvine	1990-91(2)
East Asian Languages and Literatures	M.A./Ph.D.	UC Irvine	1991-92(1)
East Asian Studies	M.A./Ph.D.	UC Irvine	1992-93(1)
Japanese Language and Literature*	B.A.	UC Irvine	1990-91(1)
Women's Studies*	B.A.	UC Irvine	1991-92(1)
Asian American Studies*	B.A.	UC Los Angeles	1991-96(1)
Women's Studies*	Ph.D.	UC Los Angeles	1992(1)
East Asian Languages and Culture	B.A.	UC Riverside	1991-92(1)
Women's Studies	B.A.	UC Riverside	1990-91(3)
Japanese Studies	B.A.	UC San Diego	1992(1)
Asian American Studies*	B.A.	UC Santa Barbara	1992(1)
Chicano and Latin American Studies*	B.A.	CSU Fresno	1992
Native American Studies*	B.A.	Humboldt State Univ.	1991
Asian Studies	B.A./M.A.	CSU Los Angeles	1992
Asian American Studies*	B.A.	CSU Northridge	1993
Japan Studies*	B.A.	San Diego State Univ.	1991
Women's Studies	M.A.	San Francisco State Univ.	1991
American Studies*	B.A.	CSU San Marcos	1992-2001
Women's Studies*	B.A.	CSU San Marcos	1992-2001

Other

Applied Science and Technology*	M.S./Ph.D.	UC Berkeley	1991(2)
Cognitive Science	B.A./M.A./Ph.D.	UC Berkeley	1991*(2)
Critical Theory	Ph.D.	UC Irvine	1991(2)
History & Philosophy of Science	Ph.D.	UC Irvine	1992-93(1)
Human Development	Ph.D.	UC Irvine	1992(1)
Development Studies*	M.A.	UC Los Angeles	1991(1)
Cognitive Science	A.B.	UC Riverside	1994-95(1)
History & Philosophy of Science	B.A./M.A./Ph.D.	UC Riverside	1991-92*(1)
Religions	Ph.D.	UC Riverside	1994(1)
Environmental Science & Management	M.E.S.M./Ph.D.	UC Santa Barbara	1992-93(2)
Human Development*	M.A./Ph.D.	UC Santa Barbara	1992(1)
Environmental Studies*	M.A./Ph.D.	UC Santa Cruz	1992-93(1)
Applied Studies	B.S.	CSU Dominguez Hills	1991
Liberal Studies	M.A.	CSU Long Beach	1992*
Aviation	B.S.	CSU Los Angeles	1992*
Philosophy*	B.A.	Cal Poly, San Luis Obispo	1991
Humanities*	B.A.	CSU San Marcos	1992-2001
Philosophy*	B.A.	CSU San Marcos	1992-2001
Cognitive Studies	B.A.	CSU Stanislaus	1991

Letters

Linguistics	Ph.D.	UC Riverside	1992-93*(1)
Classical Studies	M.A.	UC San Diego	1993(1)
Creative Writing	M.F.A.	UC Santa Cruz	1993-94*(1)
English	M.A.	CSU San Bernardino	1991

Speech Communication*	B.A.	CSU San Marcos	1992-2001

Mathematics

Statistics*	M.S.	UC Los Angeles	1991-92(1)
Applied Mathematics	M.S./Ph.D.	UC Santa Cruz	1992-93*(1)
Mathematics*	M.A.	Sonoma State Univ.	1992

Physical Sciences

Geosciences	M.S./Ph.D.	UC Irvine	1991(2)
Earth Sciences	B.A.	UC Los Angeles	1991*(2
Global Geo-Biosphere Dynamics*	M.S./Ph.D.	UC Los Angeles	1991-92(2)
Global Geosciences	B.S.	UC San Diego	1992*(1)
Geological Sciences*	Ph.D.	UC Santa Barbara/SDSU	1992(2)
Marine Sciences	Ph.D.	UC Santa Cruz	1993-94*(1)
Physical Science*	B.A.	CSU Fresno	1992
Geology*	M.S.	CSU Fullerton	1992
Physics*	M.S.	CSU Fullerton	1992
Physical Science	B.S.	CSU San Bernardino	1991
Geosciences*	M.S.	San Francisco State Univ.	1992
Chemistry*	B.S.	CSU San Marcos	1992-2001
Geography*	B.S.	CSU San Marcos	1992-2001
Geology*	B.S.	CSU San Marcos	1992-2001
Physics*	B.S.	CSU San Marcos	1992-2001

Psychology

Health Psychology	Ph.D.	UC Irvine	1992(3)
Child Clinical (Psychology Dept)	Ph.D.	UC Riverside	1991-92(1)
Psychology*	M.A.	CSU Bakersfield	1991
Psychology*	M.A./M.S.	Cal Poly, Pomona	1992

Public Affairs and Services

City Planning	A.B.	UC Berkeley	1992*(2)
Criminology, Law and Society	Ph.D.	UC Irvine	1992(2)
Transportation Science*	Ph.D.	UC Irvine	1992(2)
Social Work*	M.S.W.	CSU Los Angeles	1992
Sport Management	B.A.	CSU Los Angeles	1993*
Urban Planning*	M.U.P.	CSU San Bernardino	1991
Social Work	M.S.W.	CSU Stanislaus	1992*

Social Sciences

Anthropology	Ph.D.	UC Irvine	1992-93*(1)
Sociology	Ph.D.	UC Irvine	1993-94*(1)
Social Statistics	M.A.	UC Los Angeles	1991-92(1)
International Studies	B.A./Ph.D.	UC Riverside	1991-92*(1)
Social Documentation	M.A.	UC Santa Cruz	1993-94*(1)
International Studies	B.A.	CSU Long Beach	1991
Anthropology*	B.A.	CSU San Marcos	1992-2001
Economics*	B.A.	CSU San Marcos	1991

Political Science*	B.A.	CSU San Marcos	1991

Visual and Performing Arts

Art History*	Ph.D.	UC Davis	1993(1)
Textile Arts and Costume Design	M.F.A.	UC Davis	Five yrs.(2)
Art History	M.A./Ph.D.	UC Irvine	1991-92(2)
Dance	Ph.D.	UC Irvine	1992-93(1)
Drama Theory and Criticism	Ph.D.	UC Irvine	1992-93(1)
Film & Media Studies	M.A./Ph.D.	UC Irvine	1993-94(1)
Arts	B.F.A.	UC Los Angeles	1992*(1)
Ethnomusicology	B.A.	UC Los Angeles	1991*(2)
Music (Instrumental, Vocal, and Conducting Performance)	M.M./D.M.A.	UC Los Angeles	1991-92*(2)
Music Theater	B.A.	UC Los Angeles	1992-93*(1)
Theoretical Studies in Dance	Ph.D.	UC Los Angeles	1991-92*(2)
Art History	Ph.D.	UC Riverside	1991-92(1)
Dance History	Ph.D. (Intercampus)	UC Riverside	1992(2)
Art History / Criticism (Visual Arts)	M.A./Ph.D.	UC San Diego	1993*(1)
Theatre	Ph.D.	UC San Diego	1992(3)
Film and Video	B.A.	UC Santa Cruz	1992-93(1)
Music*	Ph.D.	UC Santa Cruz	1994-95(1)
Theatre Arts	M.F.A.	UC Santa Cruz	1991-92(2)
Visual Arts	M.F.A.	UC Santa Cruz	1992-93(1)
Visual Studies*	Ph.D.	UC Santa Cruz	1993-94(1)
Music	B.A.	CSU Bakersfield	1993*
Theatre Arts	B.A.	CSU Bakersfield	1994
Art	B.F.A.	CSU Dominguez Hills	1992
Theatre Arts	M.F.A.	CSU Fresno	1992*
Dance	B.A.	CSU Fullerton	1991*
Dance	M.F.A.	CSU Long Beach	1991
Music	M.M.	CSU Los Angeles	1991
Art	B.F.A./M.F.A	CSU Northridge	1992
Theatre Arts*	B.F.A.	CSU Northridge	1993
Art	B.F.A.	CSU Sacramento	1991*
Art	M.A.	CSU San Bernardino	1991
Art	B.F.A.	San Diego State Univ.	1991
Cinema	M.F.A.	San Francisco State Univ.	1992*
Fine Arts*	B.A.	CSU San Marcos	1992-2001
Art	B.F.A.	Sonoma State	1991*
Art	B.F.A.	CSU Stanislaus	1995*

*Projected program or degree not listed in last year's report or implementation date or title changed.

Appendix D Recommendations of the Advisory Committee

1. The Chancellor and Board of Trustees of The California State University should:

   a) Develop consistent and ongoing efforts with the Governor and Legislature to secure substantial additional support for existing Engineering programs.

   b) Develop a comprehensive strategy to mobilize on a statewide basis the business and industrial community in support of existing and projected Engineering programs in The California State University.

   c) Encourage the development of multi-campus CSU programs such as 3+2 Science-Engineering programs which would enhance regional service and build non-engineering institutional capability to offer full Engineering programs.

   d) Encourage expansion of joint doctoral programs in Engineering in order to help mitigate the state and national shortage of qualified Engineering faculty.

2. The Board of Trustees should revise the current policy on Engineering programs and begin planning now to increase enrollment capacity for Engineering on existing campuses and the development of new programs on additional campuses. Expansion of capacity should be approved based on satisfaction of the following criteria:

   a) Evidence of regional or statewide need for the program
   b) Evidence of adequate program, fiscal, and policy support to offer the program
   c) Evidence of potential program quality
   d) Evidence of student demand and potential for facilitating access for women and minority students

3. The Presidents and faculties of California State University campuses should:

   a) Expand and improve efforts to increase participation rates of students in Engineering, especially the participation rates of women and minority students.

   b) Seek ways to encourage and expand graduate and continuing education programs in Engineering to meet the needs of working professionals.

Appendix E

Proposed New Organized Research Units and Multi-Campus Research Units, University of California

DAVIS

Biotechnology Program	ORU	
Center on Administration of Criminal Justice	ORU	
Center for Combustion and Chemical Processing	ORU	
Chromosome Institute	ORU	
Ecotoxicology Program	ORU	
Humanities Institute	ORU	
Institute of Transportation Studies*	ORU	affiliate of MRU
International Nutrition Center	ORU	
Long-Term Sustainable Agriculture Research and Teaching Plots	ORU	
Materials Research Center	ORU	
Nuclear Magnetic Resonance Spectroscopy Institute	ORU	
Polymeric Ultrathin Film Systems (PUFS)	ORU	
Superfund Toxic Waste Research Center	ORU	

IRVINE

Center for Brain Aging Research	ORU	
Institute for Combustion and Propulsion Science and Technology	ORU	
Institute for Computer Systems Design	ORU	
Institute for Mathematical Behavioral Sciences	ORU	
Software Research Center	ORU	
Substance Abuse Research Center	ORU	

RIVERSIDE

Center for Crime and Justice Studies	ORU	
Ethnic Studies	ORU	
Institute of Family Studies	ORU	
Intercampus Faculty Researchers in Dance History	MRU	
Preservation Technology	ORU	
UC MEXUS	MRU	
Urban Research Center	ORU	

SAN DIEGO

American Political Institutions	ORU	
Bioengineering Biomedical Engineering Institute	ORU	

SAN FRANCISCO

Center for Drug Design	ORU	

* Change in proposed implementation date.

SANTA BARBARA

Interdisciplinary Humanities Center (IHC)	ORU

SANTA CRUZ

Agroecology Field Station	ORU
Bilingual Research Group	ORU
Center for Cultural Studies	ORU
Dickens	MRU

Appendix F

Organized Research Units and Multicampus Research Units in the University of California, Fall 1990

(This list gives Universitywide units on each campus first, followed by campus ORUs arranged by the academic units through whose Deans they report. The Date in parentheses shows the year in which the unit's establishment was approved by The Regents.)

UNIVERSITYWIDE ADMINISTRATION (MRUs)

- Agricultural Experiment Station (1874) (see also Berkeley, Davis, Riverside)
- Giannini Foundation for Agricultural Economics (1928)* (see also Berkeley, Davis)
- Kearny Foundation of Soil Sciences (1951) (see also Davis)
- Water Resources Center (1957) (see also Riverside)
- Lawrence Berkeley Laboratory (1936) (see also Berkeley)
- Lawrence Livermore National Laboratory (1952)
  - Branch of the Institute of Geophysics and Planetary Physics (1982)
- Los Alamos National Scientific Laboratory (1943)
  - Branch of the Institute of Geophysics and Planetary Physics (1980)

BERKELEY (B)

Universitywide (MRUs)

- Agricultural Experiment Station (1874) (see also UA, D, R)
  - Forest Product Laboratory (1951)
  - Giannini Foundation (1928) (see also UA, Davis)
  - Wildland Resources Center (1958)
- Lawrence Berkeley Laboratory (1936)**
  - Accelerator and Fusion Research Division (1973)
  - Center for Advanced Materials (1983)
  - Applied Sciences Division (1983)
  - Biology and Medicine Division (1941)
  - Chemical Biodynamics Division (1973)
  - Computing Division (1983)
  - Earth Sciences Division (1977)
  - Engineering Division (1984)
  - Materials and Molecular Research Division (1973)
  - Nuclear Science Division (1973)
  - Physics Division (1973)
- Institute of Transportation Studies (1947) (see also I)

Campuswide - Graduate Division (ORUs)

- Institute of Business and Economic Research (1941)
  - Center for Real Estate and Urban Economics (1962)
- Center for Middle Eastern Studies (1989)
- Center for Studies in Higher Education (1956)
- Institute of Human Development (1927)
- Institute of Industrial Relations (1945)
- Institute of East Asian Studies (1978)
  - Center for Chinese Studies (1957)
  - Center for Japanese Studies (1958)***
  - Center for Korean Studies (1964)***
- Institute of International Studies (1955)
  - Center for Latin American Studies (1958)
  - Center for Slavic and East European Studies (1957)
  - Center for South and Southeast Asia Studies (1957)

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Institute for the Study of Social Change (1969)
Space Sciences Laboratory (1960)
Survey Research Center (1958)
Institute of Urban and Regional Development (1962)

Vice Chancellor for Undergraduate Affairs

Lawrence Hall of Science (1958)

Business Administration

Center for Research in Management (1961)

Engineering

Earthquake Engineering Research Center (1967)
Electronics Research Laboratory (1967)
Engineering Systems Research Center (1961)
Sanitary Engineering and Environmental Health Research Laboratory (1949)

Environmental Design

Center for Environmental Design Research (1962)

Law

Earl Warren Legal Institute (1966)
Center for Study of Law and Society (1961)

Letters and Science

Archaeological Research Facility (1961)
Field Station for Behavioral Research (1966)
Cancer Research Laboratory (1950)
Institute of Governmental Studies (1921)
Institute of Cognitive Studies (1961)
Lowie Museum of Anthropology (1901)
Institute of Personality Assessment and Research (1949)
Center for Pure and Applied Mathematics (1960)
Laboratory of Radio Astronomy (1958)
Seismographic Stations (1887)
Museum of Vertebrate Zoology (1908)
Virus Laboratory (1948)
Theoretical Astrophysics Center (1984)

Public Health

Naval Biosciences Laboratory (1950)
[This ORU is now closed. The campus is in the process of disestablishing it formally.]

DAVIS (D)

Universitywide (MRUs)

Agricultural Experiment Station (1909) (see also UA, B, R)
Giannini Foundation (1928) (see also UA, B)
Intercampus Institute for Research at Partical Accelerators (1977) (see also SD, SB)
Kearney Foundation of Soil Science (1951) (see also UA)
Institute of Marine Resources (1954) (see also SD)
Marine Food Science Group
Kearney Foundation of Soil Science (transferred from Riverside Campus, effective 7/1/85)

Campuswide (ORUs)

Agricultural and Environmental Sciences

Institute of Ecology (1966)
Center for Consumer Research (1976)
Bodega Marine Laboratory (1983)

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Law

Center for Administration of Criminal Justice (1967)

Letters and Science

Agricultural History Center (1965)
Crocker Nuclear Laboratory (1965)
Institute of Governmental Affairs (1962)
Center for Geotechnical Centrifuge Modeling (1983)
Institute of Theoretical Dynamics (1985)
Center for Image Processing and Interactive Computing Research (1988)

Veterinary Medicine

California Primate Research Center (1962)
Institute for Environmental Health Research (1965)

IRVINE (I)

Universitywide (MRUs)

Institute of Transportation Studies (1974) (see also B)

Campuswide - (Graduate Division) (ORUs)

Developmental Biology Center (1969)
Public Policy Research Organization (1966)
Cancer Research Institute (1980)
Center for the Neurobiology of Learning and Memory (1983)
Institute for Surface and Interface Science (1987)
Critical Theory Institute (1987)

LOS ANGELES (LA)

Universitywide (MRUs)

Institute of Geophysics and Planetary Physics (1946) (see also R, SD)
White Mountain Research Station (1950)

Campuswide (ORUs)

Institute of American Cultures (1972)
Center for Afro-American Studies (1961)
American Indian Studies Center (1971)
Asian-American Studies Center (1969)
Chicano Studies Center (1969)
Institute of Industrial Relations (1945)
Laboratory of Biomedical and Environmental Sciences (1947)
Molecular Biology Institute (1963)
Institute of Plasma and Fusion Research

Dentistry

Dental Research Institute (1966)

Campuswide (ORUs)

Letters and Science

James S. Coleman African Studies Center (1958)
Institute of Archaeology (1973)
Center for the Study of Comparative Folklore and Mythology (1960)
Center for Latin American Studies (1958)
Center for Medieval and Renaissance Studies (1962)
Center for Near Eastern Studies (1957)
Gustave E. Von Grunebaum Center for Russian and East European Studies (1958)
Institute for Social Science Research (1947)
Center for the Study of Women (1984)
Center for Seventeenth and Eighteenth Century Studies (1985)

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Medicine

Brain Research Institute (1959)
Jules Stein Eye Institute (1961)
Mental Retardation Research Center (1974)
Crump Institute for Medical Engineering (1976)

RIVERSIDE (R)

Universitywide (MRUs)

Citrus Research Center and Agricultural Experiment Station (1907) (see also UA, B, D)
Institute of Geophysics and Planetary Physics (1967) (see also LA, SD)
Statewide Air Pollution Research Center (1961)
Water Resources Center (1957) (see also UA)

Campuswide (ORUs)

Dry Lands Research Institute (1963)
Center for Social and Behavioral Science Research (1970)

SAN DIEGO (SD)

Universitywide (MRUs)

California Space Institute (1980)
Institute of Geophysics and Planetary Physics (1946) (see also LA, R)
Institute of Marine Resources (1954) (see also D)
Center for Marine Affairs
Food Chain Research Group
California Sea Grant College Program
Marine Natural Products Group
Nearshore Research Group
Phytoplankton Resources Group
Intercampus Institute for Research at Particle Accelerators (1977) (see also D, SB)
Institute on Global Conflict and Cooperation (1985)

Campuswide (ORUs)

Center for Astrophysics and Space Sciences (1979)
Center for Molecular Genetics (1974)
Center for Energy and Combustion Research (1974)
Center for Human Information Processing (1967)
Center for Iberian and Latin American Studies (1975)
Institute for Nonlinear Science (1986)
Institute for Neural Computation (1967)
Center for Research in Language (1969)
Center for Music Experiment (1973)
Institute for Pure and Applied Physical Sciences (1967)
Laboratory for Mathematics and Statistics (1982)
Center for United States-Mexican Studies (1983)
Institute for Cognitive Science
Center for Magnetic Recording Research (1989)

Scripps Institution of Oceanography (1912)

Center for Coastal Studies
Climate Research Division
Geological Research Division
Marine Biology Research Division
Marine Life Research Group
Marine Physical Laboratory
Marine Research Division
Physiological Oceanography Research Division
Physiological Research Laboratory

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School of Medicine

Cancer Center (1979)
Sam and Rose Stein Institute for Research on Aging (1983)

SAN FRANCISCO (SF)

Campuswide (ORUs)

Francis I. Proctor Foundation for Research in Ophthalmology (1947)

Medicine

Cancer Research Institute (1948)
Cardiovascular Research Institute (1958)
Hooper Foundation (1913)
Hormone Research Laboratory (1950)
Institute for Health Policy Studies (1981)
Metabolic Unit for Research in Arthritis and Allied Diseases (1950)
Laboratory of Radiobiology and Environmetal Health (1949)
Reproductive Endocrinology Center (1977)

Nursing

Institute for Health and Aging (1985)

SANTA BARBARA

Universitywide (MRUs)

Intercampus Institute for Research at Particle Accelerators (1977) (see also D, SD)

Campuswide (ORUs)

Center for Chicano Studies (1969)
Community and Organization Research Institute (1967)
Computer Systems Laboratory (1972)
Neuroscience Research Institute (1964)
Institute for Crustal Studies (1987)
Institute for Interdisciplinary Application of Algebra and Combinatorics (1973)
Institute for Polymers and Organic Solids (1983)
Marine Science Institute (1969)
Quantum Institute (1969)

SANTA CRUZ (SC)

Universitywide (MRUs)

University of California Observatories (1888)

Campuswide (ORUs)

Center for Nonlinear Science (1987)
Institute for Marine Sciences (1976)
Institute for Particle Physics (1980)
Institute of Tectonics (1986)

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* Transferred to Universitywide Administration - 1975.
** Not a Berkeley ORU; listed here for reference only.
*** The Center for Japanese and Korean Studies was divided, effective July 1, 1979, into two separate centers.

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Appendix G

Review of Existing Programs, Areas, and Organized Research Units in the University of California and the California State University, 1989-90

University of California

Berkeley

Astronomy (A.B./ M.A./Ph.D.)	in progress
Chemical Engineering (M.S./Ph.D.)	
Comparative Literature (A.B./M.A./Ph.D.)	in progress
Energy & Resources Graduate Group (Ph.D.)	
Economics (A.B./ M.A./Ph.D.)	in progress
Ethnic Studies (A.B./M.A./Ph.D.)	in progress
Geology and Geophysics (A.B./M.A./Ph.D.)	
International and Area Studies	
Languages and Literatures	in progress
Law (J.D./LL.M./J.S.D.)	
Materials Science and Mineral Engineering (M.S./Ph.D.)	
Music (A.B./M.A./Ph.D.)	in progress
Optometry (M.S./O.D./Ph.D.)	in progress
Political Science (A.B./M.A./Ph.D.)	in progress
Public Health, General Preventive Medicine Residency Program	not completed formally
Social Sciences	in progress
Sociology (A.B./M.A./Ph.D.)	
Soil Resource Management (B.S.)	in progress
South and Southeast Asian Studies (A.B./M.A./Ph.D.)	in progress
Statistics (A.B./M.A./Ph.D.)	
Subject A English Composition/Subject A for Non-Native Speakers of English Program	

Davis

Graduate Division

Agronomy (M.S.)	in progress
Anthropology (M.A./Ph.D.)	continuing
Applied Mathematics (M.S./Ph.D.)	
Biochemistry (M.S./Ph.D.)	
Civil Engineering (M.S./M.Engr./ D.Engr./Ph.D.)	
Horticulture (M.S.)	
Physics (M.S./ Ph.D.)	
Vegetable Crops (M.S.)	
School of Law (J.D.)	findings not yet available

Organized Research Units

Agricultural History Center	results pending
Bodega Marine Laboratory	results pending
Center for Consumer Research	results pending
Crocker Nuclear Laboratory	to be re-reviewed
Center for Geotechnical Modeling	results pending

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Institute of Ecology	
Institute for Governmental Affairs	
College of Engineering	
Agricultural Engineering	
Aeronautical Science and Engineering	
Chemical Engineering	
Civil Engineering	
Computer Science and Engineering	
Electrical Engineering	
Mechanical Engineering	
Materials Science and Engineering	
Division of Biological Sciences	results pending
School of Medicine-Residency Reviews	
Emergency Medicine	
Family Practice	
Neurology	
Neuropathology	
Nuclear Medicine	
Obstetrics and Gynecology	
Preventive Medicine:Occupational	results pending
Ophthalmology	results pending
Pathology	
Physical Medicine and Rehabilitation	results pending
Psychiatry	
Radiology	
College of Letters and Science	
Anthropology	in progress
Art Studio/Art History (A.B.)	
Biological Sciences (A.B./B.S.)	
Chemistry (A.B./B.S.)	in progress
Comparative Literature (A.B.)	in progress
French and Italian (A.B.)	in progress
Geography (A.B./B.S.)	in progress
German (A.B.)	in progress
Individual Majors (A.B./B.S.)	in progress
Integrated Studies (A.B./B.S.)	in progress
International Relations (A.B.)	in progress
Linguistics (A.B.)	in progress
Medieval Studies (A.B.)	in progress
Microbiology (A.B./B.S.)	in progress
Physical Education (A.B./B.S.)	in progress
Physics (A.B./B.S.)	in progress
Psychology (A.B./B.S.)	in progress
Rhetoric and Communication (A.B.)	
Russian (A.B.)	in progress
Zoology (A.B./B.S.)	in progress
College of Agricultural and Environmental Sciences	
Animal Science (B.S.)	

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Applied Behavioral Sciences (B.S.)	in progress
Entomology (B.S.)	
Environmental Policy Analysis & Planning (B.S.)	
Human Development (B.S.)	in progress
Textiles and Clothing and Textile Science (B.S.)	
Wildlife and Fisheries Biology (B.S.)	

Irvine

Graduate Reviews

School of Engineering (Biochemical, Civil, Electrical, and Mechanical)	
Department of Information and Computer Science	
Graduate School of Management	results pending
Program in Social Ecology	

Undergraduate Reviews

School of Biological Sciences	
Department of Information and Computer Science	
School of Engineering	
Program in Social Ecology	

Los Angeles

Undergraduate Reviews

Anthropology (B.A./B.S.)	
Biochemistry (B.S.)	
Chemistry (B.S.)	
General Chemistry (B.S.)	
Classical Civilizations (B.A.)	
Greek (B.A.)	
Latin (B.A.)	
Classics (B.A.)	
English/Greek (B.A.)	
Cybernetics (B.S.)	
History (B.A.)	
Nursing (B.S.)	held over to 1990-91
Sociology (B.A.)	held over to 1990-91
Women's Studies (B.A.)	

Graduate Reviews

American Indian Studies (M.A.)	
Anatomy (M.S./Ph.D.)	
Anthropology (M.A./Ph.D.)	
Archaeology (M.A./Ph.D.)	
Architecture/Urban Design (M.Arch.I/M.Arch.II/M.A./Ph.D.)	
Chemistry and Biochemistry(M.S./Ph.D.)	
Classics (M.A./Ph.D.)	
History (M.A./Ph.D.)	
Microbiology and Immunology (M.S./Ph.D.)	
Nursing	held over to 1990-91
Oral Biology (M.S.)	
Physiology (M.S./Ph.D.)	
Sociology (M.A./Ph.D.)	held over to 1990-91

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Urban Planning (M.A./Ph.D.)	
Organized Research Units	
Laboratory of Biomedical and Environmental Sciences	in progress

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Riverside	
Graduate Reviews	
Anthropology	
Biology	in progress
Botany and Plant Science	
Chemistry	
Education	in progress
Entomology	
Geological Sciences	in progress
Management	in progress
Philosophy	in progress
Physics	
Plant Pathology	
Political Science	in progress
Soil Science	
Statistics and Applied Statistics	in progress

San Diego	
Undergraduate Reviews	
Music	to be completed Fall 1990
Linguistics	to be completed Fall 1990
Computer Science & Engineering	to be completed 1990-91
Economics	to be completed 1990-91
Electrical and Computer Engineering	to be completed 1990-91
History	to be completed 1990-91
Physical Fitness/Health Managemen	to be completed 1990-91
Physics	to be completed 1990-91
Theatre	to be completed 1990-91
Chemistry	to be completed 1991-92
Literature	to be completed 1991-92
Political Science	to be completed 1991-92
Women's Studies	to be completed 1991-92
Anthropology	
Health Care and Social Issues	
Judaic Studies	
Law and Society	
Mathematics	
Visual Arts	
Subject A	
Graduate Reviews	
Communication	in progress
Neurosciences	in progress
Literature	in progress
Economics	
History	

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Physics
Teacher Education Program

Organized Research Units

Center for Astrophysics	in progress
Center for Magnetic Recording Research	in progress
Center for Energy and Combustion Research	in progress
Laboratory for Mathematics and Statistics	

San Francisco

Pharmacy (Pharm.D.)	
Department of Otolaryngology	
Program in Cardiology/Program in Cardiothoracic Surgery	
Department of Family and Community Medicine	in progress

Santa Barbara

Organized Research Units

Marine Science Institute	
Institute of Polymer and Organic Solids	
Community and Organization Research Institute	to be completed 1990-91

Graduate and Undergraduate Reviews

Department of Art History
Department of Geography
Department of Mechanical & Environmental Engineering
Department of Physics
Department of Spanish & Portuguese

Santa Cruz

Biology (B.A./M.S./Ph.D.)	in progress
Language Instruction	
Linguistics (B.A./Ph.D.)	
Psychology (B.A./M.A./Ph.D.)	
Theater Arts (B.A./Certificate)	
Women's Studies (B.A.)	

The California State University

Bakersfield	
Computer Science (B.S.)	
Geology (B.S./M.S.)	
Philosophy (B.A.)	delayed
Spanish (B.A.)	
Administration (M.S.)	delayed
Public Administration (B.A./M.P.A.)	delayed
Special Major (B.A.)	
Chico	
Agriculture (B.S./M.S.)	
Agricultural Business (B.S.)	
Biological Sciences (B.S.)	
Biological Sciences (M.S.)	in progress
Botany (M.S.)	in progress
Child Development (B.A.)	rescheduled
Microbiology (B.S.)	
Religious Studies (B.A.)	
Vocational Education (B.VEd.)	rescheduled
Dominguez Hills	
Art (B.A.)	
Arts Administration (M.A.)	
Communications (B.A.)	
English (B.A., M.A.)	
French (B.A.)	
Humanities (M.A.)	
Mexican American Studies (B.A.)	
Music (B.A.)	
Philosophy (B.A.)	
Spanish (B.A.)	
Theatre Arts (B.A.)	
Business Administration (B.S./M.B.A.)	deferred to 1990-91
Public Administration (B.S./M.P.A.)	deferred to 1990-91
General Studies	deferred to 1990-91
Special Major (B.A./B.S./M.A./M.S.)	deferred to 1990-91
Fresno	
Accountancy (M.S.)	
Agriculture (M.S.)	postponed
Art (M.A.)	
Business (M.S.)	
Business Administration (M.B.A.)	
City/Regional Planning (M.C.R.P.)	postponed
English (M.A.)	
History (M.A.)	postponed

Nursing (M.S.)
Public Administration (M.P.A.)
Rehabilitation Counseling (M.S.)

Fullerton
- Anthropology (B.A./M.A.)
- Chemistry (B.A./B.S./M.S.)
- Communications (B.A./M.A.) — postponed to 1990-91
- Foreign Languages and Literature
  - French (B.A./M.A.)
  - German (B.A./M.A.)
  - Russian East European Studies (B.A.)
  - Spanish (B.A./M.A.)
  - TESOL (M.S.)
- General Education — postponed to 1990-91
- International Business (B.A.)
- Linguistics (B.A./M.A.) — postponed to 1990-91
- Management Science (M.S.)
- Mathematics (B.A./M.A.)
- Music (B.A./M.A./B.M./M.M.)
- Public Administration (M.P.A.) — postponed to 1990-91
- Special Major (B.A./M.A.)
- Taxation (M.S.)

Hayward
- Anthropology (B.A./M.A.)
- Criminal Justice Administration (B.S.)
- Geography (B.A./B.S./M.A.)
- Environmental Studies (B.A.)
- Human Development (B.A.)
- Political Science (B.A.)
- Public Administration (M.P.A.)
- Sociology (B.A./M.A.)

Humboldt State
- Biology (B.A./B.S./M.A.)
- Botany (B.S.)
- Business Administration (B.S./M.B.A.)
- History (B.A.)
- Natural Resources (M.S.)
- Philosophy (B.A.)
- Speech Pathology and Audiology (B.A./M.A.)
- Wildlife Management (B.S.)
- Zoology (B.S.)

Long Beach
- American Indian Studies — in progress
- Anatomy/Physiology (B.S./M.S.)

Biochemistry (B.S./M.S.)	
Business Administration (B.S.)	
Chemistry/Biochemistry (B.A./B.S./M.S.)	
Communicative Disorders (B.A./M.A.)	in progress
Criminal Justice (B.S./ M.S.)	
Health Care Administration (B.S./M.S.)	in progress
Health Science (B.S./ M.S./M.P.H.)	
Industrial Arts (B.A./M.A.)	in progress
Industrial Technology (B.S.)	
Manufacturing	
Electronics	
Quality Assurance	
Mexican American Studies (B.A.)	
Microbiology (B.S./M.S./M.P.H.)	
Music (B.A./B.M./ M.A./M.M.)	
Physical Education (B.A./M.A.)	
Special Major (B.A./M.A./M.S.)	
Vocational Education (BVE/M.S./M.A.)	in progress
Women's Studies	in progress

Los Angeles

Civil Engineering (B.S./M.S.)	
Electrical Engineering (B.S./M.S.)	
Mechanical Engineering (B.S./M.S.)	
Mexican American Studies (B.A./M.A.)	
Microbiology (B.A./M.S.)	
Medical Technology (B.S.)	
Music (B.A./M.A.)	
Physics (B.A./ B.S./M.S.)	

Northridge

Chemistry (B.A./B.S./M.S.)	deferred to 1990-91
Child Development (B.S.)	
Computer Science (B.S./M.S.)	deferred to 1990-91
Earth Science (B.A.)	
School of Education	
Counseling (M.S.)	deferred to 1990-91
Education (B.A.)	deferred to 1990-91
Educational Administration (M.A.)	deferred to 1990-91
Special Education (M.A.)	deferred to 1990-91
English (B.A./M.A.)	
Foreign Languages and Literature (B.A./M.A.)	
Geography (B.A./M.A.)	deferred to 1990-91
History (B.A./M.A.)	deferred to 1990-91
Home Economics (B.S./M.S.)	deferred to 1990-91
Political Science (B.A./M.A.)	deferred to 1990-91
Radio-Television Broadcasting (B.A.)	deferred to 1990-91
Theatre (B.A./M.A.)	
Urban Studies (B.A.)	deferred to 1990-91

Pomona

Agricultural Biology (B.S.)	under Academic Senate review
Architecture (B.Arch./M.Arch.)	
Biological Sciences (M.S.)	
Biology (B.S.)	
Home Economics (B.S.)	
Hotel and Restaurant Management (B.S.)	
Liberal Studies (B.A.)	under Academic Senate review
Philosophy (B.A.)	under Academic Senate review
Social Sciences (B.S.)	under Academic Senate review
Soil Science (B.S.)	in progress
Art (B.A.)	under revision
Computer Information Systems (B.S.)	under revision
Social Work (B.A.)	under revision
EDP Auditing (M.S.B.A.)	under revision
Landscape Architecture (B.S.M.S.)	under Academic Senate review

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Sacramento

- Biological Sciences (B.A./ B.S./M.S.)
- Chemistry (B.A./B.S./M.S.)
- Foreign Languages (B.A./M.A.)
- Mathematics (B.A./M.A.)
- Physics, Physical Science (B.A./B.S.)

San Bernardino

- Biology (B.A./B.S./M.A.)
- Chemistry (B.A./B.S.)
- Computer Science (B.S.)
- Foods and Nutrition (B.S.)
- Health Science (B.S.)
- Health Services Administration (M.S.)
- Industrial Technology (B.S.)
- Mathematics (M.A./B.S./M.A.T.)
- Nursing (B.S.)
- Physical Education (B.S.)
- Physics (B.A./B.S.)

San Diego

- Academic Skills Center
- Accountancy (B.S./ M.S./M.B.A.)
- Asian Studies (B.A./M.A.)
- Astronomy (B.A./B.S./M.S.)
- Business Administration
  - Finance (B.S./ M.S./M.B.A.)
- Mass Communications(M.A.)
- Natural Science (Minor/Cred.)
- Political Science (B.A./M.A.)
- Speech Communication (B.A./M.A.)
- Women's Studies (B.A.)

San Francisco
- School of Creative Arts
  - Art (B.A./M.A./M.F.A.)
  - Creative Arts (B.A./M.A.)
  - Dance (B.A.)
  - Drama (B.A./M.A.)
  - Film (B.A./M.A.)
  - Industrial Arts (B.A./M.A.)
  - Industrial Technology (B.S.)
  - Music (B.A./B.M./M.A./M.M.)
  - Radio & Television (B.A./M.A.)
  - Theatre Arts (M.F.A.)
  - Vocational Education (B.V.E.)
- School of Education
  - Communicative Disorders (B.A./M.S.)
  - Counseling (M.S.)
  - Dietetics (B.S.)
  - Education (Ed.D./Ph.D.)
  - Education (M.A.) (Concentrations in Adult Education, Business Education, ECE, Educational Administration, Educational Technology, Elementary Education, Secondary Education, and Special Education)
  - Home Economics (B.A./M.A.)
  - Nursing (B.S./M.S.)
  - Rehabilitation Counseling (M.S.)

San Jose
- Afro-American Studies (B.A.) — postponed
- Art (B.A./B.S./B.F.A./M.A./M.F.A.)
- Anthropology (B.A.)
- Aviation (B.S.)
- Cyberbetic Systems (M.S.)
- General Education — deferred to 1991-92
- Industrial Arts (B.A.)
  - Industrial Technology (B.S.)
  - Industrial Studies (M.A.)
  - Quality Assurance (M.S.)
- Journalism and Mass Communications
  - Advertising (B.S.)
  - Journalism (B.S.)
  - Public Relations (B.S.)
  - Mass Communications (M.S.)
- Psychology (B.A./M.A./M.S.)
  - Behavioral Science (B.A.)
  - Marriage, Child and Family Counseling (M.A.)
- Social Work (B.A./M.S.W.) — postponed
- Speech Communication (B.A./M.A.)

San Luis Obispo
- School of Engineering

Aeronautical Engineering (B.S./M.S.)
Civil Engineering (B.S.)
Civil and Environmental Engineering (M.S.)
Computer Science (B.S./M.S.)
Electronic and Electrical Engineering (B.S./M.S.)
Engineering Technology (B.S.)
Engineering Science (B.S.)
Environmental Engineering (B.S.)
Industrial Engineering (B.S.)
Mechanical Engineering (B.S.)
Metallurgical and Materials Engineering (B.S.)
Engineering (M.S.)

School of Professional Studies and Education
Counseling (M.S.)
Education (M.A.)
Graphic Communication (B.S.)
Home Economics (B.S./M.S.)
Industrial Technology and Industrial and Technical Studies (B.S./M.A.)
Liberal Studies (B.A.)
Recreation Administration (B.S.)
Psychology and Human Development (B.S.)

Sonoma	
Art (B.A.)	
Criminal Justice Administration	rescheduled to 1990-91
Education	
Administration	rescheduled to 1990-91
Curriculum	rescheduled to 1990-91
Reading	rescheduled to 1990-91
English	incomplete
Mexican American Studies	rescheduled to 1990-91

Stanislaus	
Biological Sciences (B.A./B.S.)	
Liberal Studies (B.A.)	incomplete
Marine Sciences (M.S.)	
Organizational Communication (B.A.)	
Physical Sciences (B.A.)	
Physics (B.A./B.S.)	

Appendix H

Outline of the Report on Program Review in the California State University

I. Introduction and Background

II. Integrating Program Review, Assessment, and Accreditation: Creating the Culture of Evidence

Achieving Institutional Effectiveness
Ralph Wolfe, Western Association of Schools and Colleges
Perspectives on Program Review
Margaret Hartmann, CSU, Los Angeles
Recent Trustee Policies on Integration of Program Review and Assessment
Recommendations from the Study of Graduate Education in the California State University
Recommendations from the Study of Student Outcomes Assessment in the California State University
Illustrations

III. Use of External Reviewers: Validation or collusion?
Issues in the use of external reviewers
Illustrations

III. Incentives, Funding, and Uses of Program Review: Toward Institutionalization

Issues in funding, policy, and structure
Illustrations

IV. Special Cases of Program Review and Assessment

Assessing the knowledge of teachers

Assessing General Education Competence

New Methods of Program Review

V. The Program Reviews and Sample Review Procedures

Bakersfield to Stanislaus
Illustrations

Appendix I

Memorandum from the Chancellor's Office, California Community Colleges, December 5, 1990

CALIFORNIA COMMUNITY COLLEGES
1107 NINTH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-8752

December 5, 1990

TO: Chief Instructional Officers

FROM: Ronnald Farland
Vice-Chancellor of Academic Affairs

Carter Doran
Chair, Council of Chief Instructional Officers

SUBJECT: Program Review Information

The Chancellor's Office, with the assistance of the Council of Chief Instructional Officers, is undertaking a new effort to gather information about districts' instructional program reviews: For purposes of this effort, "instructional program review" is intended to mean self-scrutiny, by each college, of credit and State-supported noncredit offerings to determine how well they are achieving their objectives and whether changes need to be made.

Our project does not at this time include reviews of other college or district operations aside from instruction. Nor does it include reviews of student services or instructional support programs.

This project is being undertaken in furtherance of Chancellor's Office leadership and accountability responsibilities, and in response to a legal mandate which requires the California Postsecondary Information Commission (CPEC) to oversee the program review processes of the higher education segments. The intended outcomes include a report on community college program review policies and practices to CPEC by February 1991, and, in the future, a section on local program review to be included as part of the AB 1725 published accountability report. Later outcomes might be: a model program review format which could be used by colleges that do not already have one; and an automated, simplified mechanism for collecting data on recommendations and results from local reviews.

To begin this project, we are asking each of you (or your designee) to provide the following to the Educational Standards and Evaluation Unit by February 1, 1990:

1) A copy of the college or district policy and procedures for instructional program review. Please include any questionnaire, format, or other instrument that has been adopted. If no written policy or no instrument has been adopted, please provide a statement of how instructional program review occurs in practice.

2) A summary of program review schedules at your college. If no formal schedule of reviews currently exists, please provide a statement of the status of program review at your campus.

This project is intended, among other purposes, to fulfill the intent of Title 5 Section 51022, which provides that districts shall file their program review policies with the Chancellor's Office, and Section 55130(d), which provides that the Chancellor's Office may review approved programs from time to time. Followup will be undertaken by the staff to ensure that responses are received from every college or district.

Finally, we wish to acknowledge and thank the colleges that have sent reports or policies on instructional program review to the Chancellor's Office without a specific request such as this one. Program development policies were last requested in 1983, and colleges were also asked to complete information forms on program review activities in 1985 and 1986. A number of districts have continued to report this information in various ways since then. Chancellor's Office staff is fully aware that there are numerous exemplary, rigorous, and creative program review systems already well established in a number of districts. The present project is intended, therefore, to build on that excellent work to institute a statewide program review information report and model, which will demonstrate local community college program strengths and encourage improvements, as well as meet our segmental obligations.

The instructional program review project will be coordinated by Charlie Klein of the Educational Standards and Evaluation Unit. All responses should be sent, by February 1, to:

Charlie Klein
Educational Standards & Evaluation
California Community Colleges
1107 Ninth Street
Sacramento, CA 95814

Charlie may be phoned at (916) 323-3824. We appreciate your cooperation and look forward to progress in this important area.

cc: Chief Executive Officers
Doug Burris
Rita Cepeda
Joan Sallee, CPEC
Norma Morris
Charlie Klein

Appendix J

Last Year's Recommendations

IN THE INTEREST of strengthening academic program evaluation throughout the State, the Commission offers the following 13 recommendations:

Academic program planning

1. **The Chancellor's Office of the California Community Colleges should continue its work toward instituting a system of academic program planning, similar but not necessarily identical to that employed by the University of California and the California State University. The Commission will expect a list of projected programs at a sample of colleges, together with a brief descriptive statement for each program and proposed date of implementation, for this report in 1991, and a list of projected programs and dates for their implementation from all colleges for the 1992 report.**

2. **The Commission, with the advice of the Intersegmental Program Review Council, should develop a statewide intersegmental planning framework (as defined on pages 12-13) for the development and implementation of new programs in those disciplinary areas with a number of existing and proposed programs, including the fine and performing arts, computer science, engineering, and the like. If possible, the use of segmental and intersegmental reviews should be used in the development of this framework. Once the frameworks are in place, Commission staff will forego review of individual proposals in those areas, except for joint doctorates and doctoral degree programs. Rather, segments will report annually on how program planning in each disciplinary area is consistent with the intersegmental agreement.**

Academic program approval

3. **The segments should advise the Commission on at least a quarterly basis concerning the status of all new program proposals.**

4. **For purposes of comparable data, the Office of the President should send to the Commission "information only" copies or one- to two-page summaries of those proposals for new programs that are not to be formally reviewed, including baccalaureate degree programs.**

5. **Proposals submitted by the segments should contain sufficient documentation, prepared either by the campus or the systemwide office, to allow Commission staff to evaluate the proposal according to student demand, societal needs, appropriateness to institutional and segmental mission, the number of existing and proposed programs in the field, total costs of the program, the maintenance and improvement of quality, and the advancement of knowledge.**

6. **Each segment should develop procedures to monitor for the first three to four years that small number of programs with which the Commission has concurred with some reluctance.**

Academic program review

7. **The Office of the President and the State University Chancellor's Office should ensure that campuses are able to review the entirety of their curriculum every five-to-seven years.**

8. **The Office of the President and the State University Chancellor's Office should give high priority to revising or completing their**

guidelines on program review within the coming year.

9. The Chancellor's Office of the California Community Colleges shall survey a sample of colleges about their program review policies and procedures and submit those data to the Commission for the 1991 report. Comprehensive information about program review in all the community colleges shall be expected thereafter.

10. Segmental offices should undertake as many systemwide reviews of programs in selected fields as internal resources allow; the process, findings, and recommendations of these reviews should be discussed in a timely manner with the Intersegmental Program Review Council in the interest of long-range planning.

11. The Intersegmental Program Review Council shall consider during 1990-91 the establishment of an intersegmental review of one of those areas, such as the fine and performing arts, in which there is a significant number of projected and existing programs, in order to develop a planning framework as called for in Recommendation 2 above.

General

12. In the 1991 report, Commission staff shall report on academic program planning and review in a selected sample of independent colleges and universities.

13. In the 1991 report, Commission staff shall report on the progress made by the segments on these recommendations.

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CALIFORNIA POSTSECONDARY EDUCATION COMMISSION

THE California Postsecondary Education Commission is a citizen board established in 1974 by the Legislature and Governor to coordinate the efforts of California's colleges and universities and to provide independent, non-partisan policy analysis and recommendations to the Governor and Legislature.

Members of the Commission

The Commission consists of 15 members. Nine represent the general public, with three each appointed for six-year terms by the Governor, the Senate Rules Committee, and the Speaker of the Assembly. The other six represent the major segments of postsecondary education in California.

As of September 1991, the Commissioners representing the general public are:

Lowell J. Paige, El Macero; *Chair;*
Henry Der, San Francisco; *Vice Chair;*
Mim Andelson, Los Angeles;
C. Thomas Dean, Long Beach;
Rosalind K. Goddard, Los Angeles;
Helen Z. Hansen, Long Beach;
Mari-Luci Jaramillo, Emeryville;
Mike Roos, Los Angeles
Stephen P. Teale, M.D., Modesto.

Representatives of the segments are:

Joseph D. Carrabino, Orange; appointed by the California State Board of Education;

William T. Bagley, San Rafael; appointed by the Regents of the University of California;

John F. Parkhurst, Folsom; appointed by the Board of Governors of the California Community Colleges;

Theodore J. Saenger, San Francisco; appointed by the Trustees of the California State University; and

Harry Wugalter, Thousand Oaks; appointed by the Council for Private Postsecondary and Vocational Education.

The position of representative of California's independent colleges and universities is currently vacant.

Functions of the Commission

The Commission is charged by the Legislature and Governor to "assure the effective utilization of public postsecondary education resources, thereby eliminating waste and unnecessary duplication, and to promote diversity, innovation, and responsiveness to student and societal needs."

To this end, the Commission conducts independent reviews of matters affecting the 2,600 institutions of postsecondary education in California, including community colleges, four-year colleges, universities, and professional and occupational schools.

As an advisory planning and coordinating body, the Commission does not administer or govern any institutions, nor does it approve, authorize, or accredit any of them. Instead, it cooperates with other State agencies and non-governmental groups that perform these functions, while operating as an independent board with its own staff and its own specific duties of evaluation, coordination, and planning.

Operation of the Commission

The Commission holds regular meetings throughout the year at which it debates and takes action on staff studies and takes positions on proposed legislation affecting education beyond the high school in California. By law, its meetings are open to the public. Requests to speak at a meeting may be made by writing the Commission in advance or by submitting a request before the start of the meeting.

The Commission's day-to-day work is carried out by its staff in Sacramento, under the guidance of its executive director, Warren H. Fox, who was appointed by the Commission in June 1991.

The Commission publishes and distributes without charge some 30 to 40 reports each year on major issues confronting California postsecondary education. Recent reports are listed on the back cover.

Further information about the Commission, its meetings, its staff, and its publications may be obtained from the Commission offices at 1020 Twelfth Street, Third Floor, Sacramento, CA 98514-3985; telephone (916) 445-7933.

ACADEMIC PROGRAM EVALUATION IN CALIFORNIA, 1989-90

California Postsecondary Education Commission Report 91-12

ONE of a series of reports published by the Commission as part of its planning and coordinating responsibilities. Additional copies may be obtained without charge from the Publications Office, California Postsecondary Education Commission, Third Floor, 1020 Twelfth Street, Sacramento, California 95814-3985.

Recent reports of the Commission include:

90-28 State Budget Priorities of the Commission, 1991: A Report of the California Postsecondary Education Commission (December 1990)

90-29 Shortening Time to the Doctoral Degree: A Report to the Legislature and the University of California in Response to Senate Concurrent Resolution 66 (Resolution Chapter 174, Statutes of 1989) (December 1990)

90-30 Transfer and Articulation in the 1990s: California in the Larger Picture (December 1990)

90-31 Preliminary Draft Regulations for Chapter 3 of Part 59 of the Education Code, Prepared by the California Postsecondary Education Commission for Consideration by the Council for Private Postsecondary and Vocational Education (December 1990)

90-32 Statement of Reasons for Preliminary Draft Regulations for Chapter 3 of Part 59 of the Education Code, Prepared by the California Postsecondary Education Commission for the Council for Private Postsecondary and Vocational Education (December 1990)

91-1 Library Space Standards at the California State University: A Report to the Legislature in Response to Supplemental Language to the 1990-91 State Budget (January 1991)

91-2 Progress on the Commission's Study of the California State University's Administration: A Report to the Governor and Legislature in Response to Supplemental Report Language of the 1990 Budget Act (January 1991)

91-3 Analysis of the 1991-92 Governor's Budget: A Staff Report to the California Postsecondary Education Commission (March 1991)

91-4 Composition of the Staff in California's Public Colleges and Universities from 1977 to 1989: The Sixth in the Commission's Series of Biennial Reports on Equal Employment Opportunity in California's Public Colleges and Universities (April 1991)

91-5 Status Report on Human Corps Activities, 1991: The Fourth in a Series of Five Annual Reports to the Legislature in Response to Assembly Bill 1829 (Chapter 1245, Statutes of 1987) (April 1991)

91-6 The State's Reliance on Non-Governmental Accreditation, Part Two: A Report to the Legislature in Response to Assembly Bill 1993 (Chapter 1324, Statutes of 1989) (April 1991)

91-7 State Policy on Technology for Distance Learning: Recommendations to the Legislature and the Governor in Response to Senate Bill 1202 (Chapter 1038, Statutes of 1989) (April 1991)

91-8 The Educational Equity Plan of the California Maritime Academy: A Report to the Legislature in Response to Language in the Supplemental Report of the 1990-91 Budget Act (April 1991)

91-9 The California Maritime Academy and the California State University: A Report to the Legislature and the Department of Finance in Response to Supplemental Report Language of the 1990 Budget Act (April 1991)

91-10 Faculty Salaries in California's Public Universities, 1991-92: A Report to the Legislature and Governor in Response to Senate Concurrent Resolution No. 51 (1965) (April 1991)

91-11 Updated Community College Transfer Student Statistics, Fall 1990 and Full-Year 1989-90: A Staff Report to the California Postsecondary Education Commission (April 1991)

91-12 Academic Program Evaluation in California, 1989-90: The Commission's Fifteenth Annual Report on Program Planning, Approval, and Review Activities (September 1991)

91-13 California's Capacity to Prepare Registered Nurses: A Preliminary Inquiry Prepared for the Legislature in Response to Assembly Bill 1055 (Chapter 924, Statutes of 1990) (September 1991)

91-14 Supplemental Report on Academic Salaries, 1990-91: A Report to the Governor and Legislature in Response to Senate Concurrent Resolution No. 51 (1965) and Supplemental Language to the 1979, 1981, and 1990 Budget Acts (September 1991)

91-15 Approval of Las Positas College in Livermore: A Report to the Governor and Legislature on the Development of Las Positas College -- Formerly the Livermore Education Center of Chabot College (September 1991)